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DECEMBER 1980

STATE OF MONTANA
DEPARTMENT OF LIVESTOCK
ANIMAL HEALTH DIVISION
HELENA, MONTANA 59620

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1980
DECEMBER
MONTHLY LETTER

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THE FESTIVE SEASON

Here it is almost the end of November already and Thanksgiving will be on us. The staff here in Helena, all want, to extend thanks for our many blessings and best wishes to you all.

Since Christmas will have come and gone by the time another newsletter is sent out we all wish you a Merry Christmas and best wishes for you and your families.

A QUICK REVIEW OF THE STATE'S STATUS

During the past year the battle with brucellosis and the brucellosis program has continued. Presently Montana has nine infected herds with 3 herds in process of depopulation and at least 2 more herds that hopefully with clean up through testing within the next month or so.

Hopefully Montana will be able to apply for Class A status (freedom from infection) at least in 55 counties by January 1, 1982. If we still have one county with infection present, we will apply for Class B status in that county and then press on for clean up there and movement to Class A.

In September the Board of Livestock instructed the State Veterinarian to adopt the reduced dosage of Brucella abortus Strain 19 vaccine, regardless of U.S.D.A. sanction.

Later in October, U.S.D.A. announced its decision to adopt the dosage so Montana has at least partial blessing.

The Animal Health Division staff felt that it was most important to have the 1980 heifer calf crop uniformly vaccinated with the reduced dose to get away from the persistent titer problems as rapidly as possible.

One plus that seems to be present already, is that evidently more heifers are being vaccinated this year than previously.

The Division is continuing to maintain the preventive dip program in order to maintain the states scabies free status.

Dr. Glosser worked with representatives of the National Cattlemen's Association in an attempt to retain toxaphene as the preferred dip in the scabies control program. Presently they have at least had partial success.

Early this summer VVND was diagnosed in Miami, Florida and Federal veterinarians immediately jumped into the fray and worked to contain the spread of the disease that could decimate the US poultry industry.

Traces to many states including Montana were made. In Montana's case a number of birds and premises were tested and inspected and fortunately no evidence of the disease was found.

1980 has been an active year in the skunk rabies and bat rabies department. The earliest case was reported on February 7, 1980 and the latest the 18th of November.

There were several human exposures both thorough bats and skunks. A number of people were treated with the new Human Diploid cell culture vaccine and Human Rabies Immune Globulin.

During the summer 3 cases of Western Equine Encephalomyelitis were reported clinically. The season seemed to be late due to the cool summer, consequently there were no large outbreaks noted.

Overall the state doesn't seem to be in too bad of shape except that the east end has had the miseries during the day summer but late summer and fall rains have made things a little less bleak. Especially if there are spring rains the area should look pretty fair next year.

Oddly, when talking with quite a number of people from the eastern counties, calves seem to be running heavier than normal in quite a few areas. Due partly to running the cows on hay fields that weren't cut and grain fields that weren't harvested, I suppose.

Thats about all the rambling for now. Season's Greeting's to you all.

All of us here in the Helena office and the field Districts.

RACCOON RABIES - FLORIDA

On April, 25, 1980, a pet raccoon that had had contact with 150 children and adults during the previous 7 months was diagnosed as rabid by fluorescent-antibody (FA) examination of brain tissue. The animal had exhibited its first signs of illness on April 21. Exposure histories were obtained for persons who had had contact with the animal during the 60 days before it became ill, and postexposure prophylaxis with human rabies immune globulin (HRIG) and duck embryo (DEV) was recommended for 74 persons. Seventy-one persons received a complete postexposure vaccination series of HRIG and 23 doses of DEV. The 74 exposures were bites (10), scratches (23), licks (17), petting only (16), other* (6), and unknown (2). Of these 74 exposures, 52 (70%) occurred in school, 9 (12%) at home, 1 (1%) in another setting, and 12 (16%) in unknown sites. There were 43 males (58%) and 31 females exposed; most of those exposed (72%) were 13 to 15 years old (range 10-63 years).

The raccoon had been found in the woods in Okaloosa County, Florida, on September 15, 1979. It was taken into a home, and a pet collar was placed on its neck. However, the animal soon was released, and it stayed in the general vicinity, begging food. On November 15, a ne rby shopkeeper and his wife, assuming, because of the raccoon's collar, that it was someone's lost pet and therefore safe to keep, took it in as a house pet.

After that date, the raccoon was in captivity and was not free to roam. However, it escaped for a 24-hour period during the first week of January 1980. On April 21, it began to exhibit aggressive behavior, anorexia, chcking, and staggering, and it was taken to a veterinarian. It bit the veterinarian and his assistant before it was killed and examined. FA tests of brain specimens were positive for rabies virus. The animal had never been vaccinated. Exposure to this rabid animal resulted in the administration of 554 cc of HRIG @ $18.29 per cc, or $10,132, plus 1,883 doses of DEV @ $2.97 per cc, or $5,592. The estimated cost for physicians, nurses, and local epidemiologic investigative time was $4,440 ($60 minimum per exposed person). In addition, the estimated cost for persons counseled but not considered exposed was $1,460 ($20 per

Person). Thus, the minimum estimated cost for this exposure to a pet raccoon was $21,624, a figure which does not include the time of state and federal epidemiologic and laboartory personnel.

Editorial Note: This incident is noteworthy for several reasons. First, it points out once again the potential hazard of harboring wild animals as pets. There is not way to determine if an animal caught in the wild is incubating rabies. Secondly, this episode illustrates the need to assess possible exposures to avoid overtreatment. Many of the persons treated in this incident were probably not exposed to the virus. As noted in the ACIP Recommendations on Rabies Prevention (1), exposure is defined as contamination of scratches, abrasions, open wounds, or mucous membranes with infectious saliva. Petting, per se, is specifically noted as a non-exposure. Rabies virus cannot penetrate unbroken skin, and this must be kept in mind in determining exposure potential. Finally, this episode illustrates that the pathogenesis of rabies in wildlife is still incompletely understood, a fact which affects treatment. Persons were treated who had been "exposed" as long as 60 days before the raccoon's onset of illness because the period of preclinical shedding for wildlife is unknown, although some data would suggest that it is short (i.e., less than 3 weeks). By contrast, persons exposed to rabid dogs and cats are only treated if their exposure was up to 10 days before the animal's onset of illness because it is known that dogs and cats shed virus for only a few days before illness develops.

The decision in this case to use a 60-day risk period cannot be medically challenged although it may have resulted in unnecessary treatment. Given the present inability to prevent or recognize rabies in wild animals and the increasing frequency with which pet wildlife are being found rabid, it is strongly recommended that wild animals not be harbored as pets.

* Included feeding, holding, or touching the animal.

DEMAND FOR DMSO POSES POTENTIAL PROBLEM FOR VETERINARIANS

The demand for what has been touted as a wonder drug--DMSO (dimethyl sulfoxide)--has brought pressure on many veterinarians to sell DMSO animal products for uses other than in veterinary medicine. Practitioners should be aware, however, that they can face up to year in prison and a $1,000 fine on each count for a first offense if they are caught selling veterinary drugs illegally.

DMSO is a byproduct of the papermaking industry and is available commercially as an industrial solvent and degreaser. It began to attract attention as a therapeutic agent in 1961 when it was discovered to have the ability to penetrate the skin rapidly and carry other drugs with it into the blood. Since that time it has been hailed by some as an effective treatment for conditions ranging from arthritis to mental retardation based not only on its "carrier" abilities but also on its own chemical makeup.

DMSO has been approved for a limited number of medicinal uses. In humans a 50 percent solution is approved for treatment of a rare, painful bladder condition called interstitial cystitis. In animals a 90 percent solution is approved for topical treatment of horses and dogs to reduce acute swelling due to trauma. Other claims for its use have not been substantiated by well-controlled studies at this time, but FDA continues to be interested in receiving such studies.

There has been a recent upsurge in interest in DMSO largely due to a "60 Minutes" television broadcast in March of this year showing how some people claim to have been helped by treatment with the product. The sale and use of DMSO (often for self-medication) has been increasing substantially. People have been encouraged to buy the industrial grade product, which can be purchased readily in commercial channels, or the medicinal grade veterinary DMSO.

FDA is concerned about the risks that may be involved in using industrial grade DMSO (which is of unknown purity and quality and comes in concentrations of 90-99 percent) and in using any DMSO in high concentrations, large amounts, or for unapproved uses. There is also the potential that DMSO, as a "carrier" chemical, will deliver harmful substances into the bloodstream if they are present in the impure product or on the skin.

Veterinarians not only should refrain from illegally selling the drug, they also should use DMSO with caution in their practice. Race track practitioners, for example could be accused of illegally doping horses if other topical drugs applied at the same time as DMSO get carried through the skin and are detected in the blood. DMSO should not be used on animals intended for food (as no residue data are available) or for breeding because of potential embryonic malformations.

NORTH DAKOTA PERMIT REQUIREMENTS

Dr. Dean E. Flagg, North Dakota State Veterinarian has again written us that a number of Montana veterinarians are repeatedly failing to comply with North Dakota's import permit requirements.

Again here it is:

> ".....permits are required on all femiales over 10 months of age, regardless of origin or Brucellosis vaccination status."

Please pay particular attention to this when you write healths on heifers and cows to North Dakota.

DIAGNOSTIC LABORATORY NEWS

By:
J. A. Bergeron, V.M.D.
B. Kraft

I. Accessions reported out in October:

	October 1980	October 1979	% change
BOVINE	144	143	0.69%
EQUINE	34	31	9.67%
PORCINE	26	36	-27.77%
OVINE	7	9	-22.22%
FELINE	14	31	-54.83%
CANINE	102	68	50.00%
AVIAN	4	12	-66.66%
WILDLIFE	47	27	74.07%
MISC.	44	44	
TOTAL	422	401	5.24%

II. Serology

A. Brucellosis (all species) total sera -- 35,520
   1. Brucellosis routine tests -- 24,038; 28 positive
   2. Quarantine herd tests -- 1,098; 50 positive
   3. Slaughter samples -- 10,377; 184 positive
   4. Seminal plasma - Brucellosis -- 7 negative

B. Brucellosis CF tests -- 1,283

C. Leptospirosis (all species) -- 313 sera
   1. L. pomona -- 61 positive
   2. L. hardjo -- 1 positive
   3. L. icterohemorrhagia -- 45 positive
   4. L. grippotyphosa -- 5 positive
   5. L. autumnalis -- 12 positive
   6. L. tarassovi -- 1 positive

D. Bluetongue -- 518 sera; 24 positive

E. Anaplasmosis -- 547 sera; 7 positive

F. IBR -- 106 sera; 18 positive

G. BVD -- 83 sera; 14 positive

H. PI_3 -- 15 sera; 2 positive

I. BLV -- 38 sera; all negative

J. EIA -- 227 sera; 2 positive

K. WEE and EEE -- 6 sera;all negative

L. Pseudorabies -- 317 sera
   1. Routine -- 153; 10 toxic
   2. Slaughter samples -- 164; 26 toxic

M. Feline Leukemia Virus -- 3 sera; 2 positive

III. Rabies

A. 75 requests

1. Human exposure

a. 1 positive (bovine) Sheridan county

b. 27 negative

2. No human exposure

a. 5 positive (2 bats and 3 skunks)

b. 42 negative

Bats - Missoula and Valley counties

Skunks - Valley (2) and Dawson counties

IV. Bacteriology

A. Total

1. 189 accessions processed resulting in 236 isolates

B. Antibiotic sensitivities were run on 209 isolates

C. FAT (clostridia)

1. 6 positive - Cl. novyii (5 bovine), Cl. septicum (1 ovine)

2. 2 negative

D. Salmonella

1. Salmonella dublin - 1 bovine case
2. Salmonella worthington - 1 bovine case

E. Brucella

1. 2 sets of tissues representing 1 herd and 7 sets of tissues from Idaho representing 2 herds were cultured at the Bozeman Laboratory. All were negative.

F. Miscellaneous

1. Moraxella bovis - 3 bovine and 1 buffalo; Moraxella sp. - 1 porcine
2. Erysipelothrix rhusiopathiae - 1 porcine

V. Virology

A. Virus isolation attempts
1. Bovine - 14 cases; 2 positive BVD and 1 positive IBR
2. Porcine - 16 cases; all negative
3. Wildlife - Mt. goat -- 1 negative

VI. Miscellaneous Tests

A. Electron Microscopy
1. 6 bovine - 2 corona
2. 1 equine
3. 4 porcine
4. 3 canine
5. 1 mink

ENTEROTOXEMIA IN FOALS

A sudden death syndrome in weanling foals and yearlings was discussed at the meeting of the Western Conference of Veterinary Diagnostic Pathologists held in October. This condition has been called "enterotoxemia" although a specific toxin has not been identified.

The clinical signs are those of acute colic with diarrhea, dyspnea and death. On necropsy the animals are bloated and autolytic changes occur rapidly. The gastrointestinal tract is distended; there is usually grain present and a strong fermentation odor. Evidence of torsion or gastric rupture may also be seen.

This condition occurs primarily in animals being fed pelleted feed and/or sweet feed; especially those containing a high proportion of corn. Treatment includes antitoxins to Clostridium perfringens types A and D, and antibiotics.

Some additional comments from the same meeting:

> Natural exposure to Equine Herpesvirus I only produces immunity for 60-90 days; therefore, animals in high risk situations should receive vaccinations every 3-4 months.
>
> The serum neutralization test is meaningless for determining abortion due to EHV-I.
>
> The condition called Colitis-X may be due to a clostridial organism and may also be referred to as equine intestinal clostridiosis. It may be precipitated by changes in feed, stress, or antibiotic therapy (these may produce changes in the normal intestinal flora).

ABORTIONS

The abortion season will soon be here and we would like to remind everyone of the proper samples to submit.

A. Submit the entire fetus if possible, or
B. Submit fresh fetal lung, spleen and kidney plus fixed lung, liver, kidney and spleen, and fetal stomach contents.
C. Stomach contents can be submitted by tying off the abomasum or by aspirating 5-10 ml. into a sterile syringe; (leave in syringe or place in sterile tube).
D. Submit fresh and fixed cotyledons from placenta if available.

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REO VACCINE

Dr. Glenn Halver has informed me that the Veterinary Research Laboratory is ceasing manufacture of Ram Epididymitis vaccine immediately since there is a commercial source for that vaccine. Colorado Serum Company of Denver is manufacturing this vaccine and it is currently available.

MORE ON THE REDUCED DOSAGE

Listed below are the viability counts that have been done at the Diagnostic Laboratory in Bozeman so far. As you can see the vaccine can be stretched to go a long ways.

All of the dilutions are based on using 25cc of reconstituted vaccine mixed with the prescribed amount of diluent (either sterile physiological saline or sterile water for injection). Then administer a 2cc dose of the diluted vaccine.

As more lots of vaccine are subjected to viability counting we will have the information available in the office. This list is current through October 28, 1980.

Also there is still a supply of federally purchased vaccine available for distribution to practitioners at no cost. If you need some please call either Dr. Holcomb or Debra Fellows at the Laboratory in Bozeman and they will send you what you need.

I would like to thank all the practitioners who have so graciously donated vials of vaccine to the laboratory so that viability counts could be carried out and thereby speed up Montana's adoption of the reduced dose of Brucella abortus vaccine.

This is but one more example of Montana's veterinarians unselfish subsidization of both State and Federal Disease Control Programs. The practitioner's efforts and the costs he has absorbed have largely been unrecognized and unheralded by the governmental bodies he has supported without objection.

BRUCELLA ABORTUS VACCINE VIABILITY COUNTS

Use 25cc of reconstituted vaccine with the recommended amount of diluent and administer a 2 cc dose.

Jen-Sal

LOT NO.	VIABILITY COUNT	AMOUNT OF DILUENT	EXPIRATION DATE
435	$3X10^9$	50 cc	8-15-79
484	$12X10^9$	175 cc	4-10-80
505	$10X10^9$	141 cc	10-2-80
506	$11X10^9$	158 cc	10-2-80
511	$20X10^9$	308 cc	10-9-80
513	$15X10^9$	225 cc	10-19-80
514	$14X10^9$	208 cc	10-19-80

Jen-Sal (cont)

LOT NO.	VIABILITY COUNT	AMOUNT OF DILUENT	EXPIRATION DATE
516	$15X10^9$	225 cc	10-23-80
526	$20X10^9$	308 cc	12-11-80
532	$12X10^9$	175 cc	12-24-80
543	$13X10^9$	191 cc	2-1-81
545	$12X10^9$	175 cc	2-8-81
553	$11X10^9$	158 cc	3-10-81
555	$13X10^9$	191 cc	3-10-81

Haver-Lockhart

LOT NO.	VIABILITY COUNT	AMOUNT OF DILUENT	EXPIRATION DATE
15035	$13X10^9$	191 cc	7-26-80
15042	$12X10^9$	175 cc	10-23-80
15044	$14X10^9$	208 cc	10-10-80
15045	$16X10^9$	241 cc	10-23-80
15046	$11X10^9$	158 cc	10-24-80
15047	$12X10^9$	175 cc	10-24-80
15052	$7X10^9$	91 cc	2-10-81
15053	$12X10^9$	175 cc	3-17-81
15055	$18X10^9$	275 cc	5-9-81
15056	$15X10^9$	225 cc	5-13-81
15057	$17X10^9$	258 cc	5-20-81
15061	$14X10^9$	208 cc	6-7-81
15062	$14X10^9$	208 cc	6-14-81
15065	$13X10^9$	191 cc	6-26-81

Professional Biologics

LOT NO.	VIABILITY COUNT	AMOUNT OF DILUENT	EXPIRATION DATE
1288	$8X10^9$	108 cc	6-5-80
1315	$9X10^9$	125 cc	7-2-80
1501	$10X10^9$	141 cc	4-16-81

HUMAN ANTHRAX - COLORADO

The first known case of human anthrax in Colorado since 1955 occurred in September 1980 in a 30-year-old man who had worked with animal carcasses. Bacillus anthracis has been isolated from dead cattle in the area.

The man had assisted in skinning animal carcasses at a local rendering plant from August 26-31, during which time he was scratched on the arm by an animal hoof. On September 4, a small lesion resembling an insect bite developed on his right forearm. The lesion progressed in size and developed secondary swelling. When the man was seen by his physician on September 8, the lesion was approximately 2 X 3 cm in diameter, and a black eschar and satelite vesicles were present. Cultures were taken, and intramuscular penicillin was given. On

a follow-up visit the next day, he had more swelling of his arm, a temperature of 104 F (40 C), headache, and myalgias. He was admitted to a local hospital and begun on high-dose intravenous penicillin. He has had a slow but progressive recovery since that time. B. anthracis was isolated from the wound culture.

Before this patient's exposure to cattle carcasses, there had been several unexplained deaths among livestock in a neighboring county in Colorado. Fifty-one cattle from 6 ranches in north-central Colorado died in the period August 13-September 13; the most deaths occurred on August 31. The diagnosis of anthrax was established by culture from 2 of the dead animals by the Veterinary Diagnostic Laboratory of Colorado State University on September 3. A quarantine and vaccination program for livestock in the area was initiated by the Colorado Department of Agriculture; the number of cases subsequently decreased.

Before recognition of the outbreak, 7 of the 51 cattle carcasses were processed through the plant in which the patient occasionally worked. In addition, a total of 14 hides from affected cattle herds were transported to a tanning facility in Torrington, Wyoming; these hides, and other hides in contact with them, were buried. A small portion of fresh-frozen ground beef from the same animals was shipped to Rapid City, South Dakota, for consumption by racing dogs. An attempt to recall the beef was made, but it had already been fed to the dogs. However, no illness was subsequently recognized in these animals. The remaining products from the 14 carcasses were identified and sent through the rendering process, which involves cooking at approximately 260 F (126.6 C) for 30-45 minutes.

Surveillance of other workers at the rendering facilities, tanning facility, and affected ranches has yielded no other cases in humans.

Editorial Note: This is the first human case of anthrax in the United States since 1978, when there were 6 cases. The High Plains of the western United States have experienced periodic epizootics of anthrax in cattle over the past 25 years. However, human disease associated with these outbreaks has been unusual. Rainy spring seasons and hot, dry summers appear to precede cattle disease in this area. The mechanism by which these meteorological facters contribute to the occurrence of anthrax outbreaks in grazing range cattle is unknown.

Source: Morbidity and Mortality Weekly Report, October 3, 1980, Vol. 29, No. 39.

"THOSE @#!* VACCINATION TAGS"

There has been a considerable amount of controversy generated by the federal requirement on vaccination tag use.

We have talked with ~~thousands, hundreds,~~ several practitioners since the adoption of this requirement, and to a man, they have voiced their own and their clients objections and concerns.

Following is a letter from Wes Tibbetts of the Miles City Livestock Center, concerning a wreck that he got into with a bunch of vaccinated heifers that weren't tagged and were poorly tattooed.

I realize that owners are objecting but you might inform them that heifers without tags are going to cause them trouble and MONEY.

Miles City Livestock Center
Serving Eastern Montana's Livestock Industry
Phone 406-232-1790 P. O. Box 8
MILES CITY, MONTANA 59301
October 1, 1980

James W. Glosser, DVM
Administrator & State Veterinarian
Montana Department of Livestock
Capitol Station
Helena, Montana 59601

Dear Dr. Glosser:

I had an experience last week that demonstrated tome the need for greater care in identification of bangs vaccinated heifers, this would include both the metal ear tag and legible tattoos.

I bought a bunchof yearling heifers in the country. They were represented as bangs vaccinated by the local veterinarian. I did mention that I couldn't see any ear tags but the owner said that he didn't want them put on.

We worked the heifers and very few of them had legible tattoos, many didn't have any. I called the Veterinarian that had done the vaccination on them and explained how it would be better if we could tag them beinghe had done the work. He said fine, I know they are vaccinated, so I'll send you the tags and you can tag them. That sounded alright, so I sold the heifers through the ring represented that way. One of the buyers wanted his tagged, so the nextmorning when the crew set out to tag the heifers, the Deputy StateVeterinarian here at the yeards, confiscated the ear tags. He said it wasn't the way it was supposed to be done. He mentioned that he had wondered about it when he heard us announce in the ring how we were going to sell them.

To make a long story short, it is damm important that these cattle are vaccinated and the proper identification is given them. Bangs vaccinated females are worth more but everything must be right with the identification or it curtails the movement of them to other states, this lowers their salable value.

Sincerely,

Wesley Tibbetts

DIAGNOSTIC LABORATORY NEWS

By:
J. A. Bergeron, V.M.D.
B. Kraft

I. Accessions reported out in September:

	September 1980	September 1979	% change
BOVINE	131	79	65.8%
EQUINE	34	36	-5.5%
PORCINE	18	16	12.5%
OVINE	13	13	
FELINE	13	15	-13.3%
CANINE	60	49	22.4%
AVIAN	9	11	-18.2%
WILDLIFE	112	74	51.4%
MISC.	52	18	188.8%
TOTAL	442	311	42.1%

II. Serology

A. Brucellosis (all species) total sera -- 18,030
   1. Brucellosis routine tests -- 8,357; 34 positive
   2. Quarantine herd tests -- 217; 2 positive
   3. Slaughter samples -- 9,452; 18 positive
   4. Seminal plasma - Brucellosis -- 4 negative

B. Brucellosis CF tests -- 942

C. Leptospirosis (all species) -- 109 sera
   1. L. pomona -- 5 positive
   2. L. icterohemorrhagia -- 19 positive
   3. L. grippotyphosa -- 4 positive
   4. L. autumnalis -- 2 positive
   5. L. canicola -- 1 positive

D. Bluetongue -- 297 sera; all negative

E. Anaplasmosis -- 165 sera; 9 positive

F. IBR -- 86 sera; 15 positive

G. BVD -- 68 sera; 9 positive

H. PI_3 -- 51 sera; 7 positive

I. BLV -- 11 sera; all negative

J. EIA -- 530 sera; 7 positive

K. Pseudorabies -- 382 sera
   1. Routine -- 127 negative; 7 toxic
   2. Slaughter samples -- 207 negative; 41 toxic

L. WEE and EEE -- 23 sera; 3 positive WEE

III. Rabies

A. 123 requests

1. Human exposure

a. 2 positive (bats) Cascade and Flathead counties

b. 20 negative

2. No human exposure

a. 12 positive (8 bats and 4 skunks)

b. 89 negative

Skunks - Custer, Dawson, Blaine and Judith Basin counties

Bats - Gallatin (2), Cascade (2), Hill (2), Lewis and Clark and Wheatland counti

IV. Bacteriology

A. Total

1. 157 accessions processed resulting in 650 isolates

B. Antibiotic sensitivities were run on 565 isolates

C. FAT (Clostridia)

1. 3 positive - Cl. chauvoei, Cl. novyii, Cl. septicum (all bovine)

2. 3 negative

D. Salmonella

1. Salmonella dublin - 4 bovine cases

2. Salmonella typhimurium (copenhagen) - 1 equine case

E. Brucella

1. 4 sets of tissues, representing 4 herds, were cultured at the Bozeman Laboratory. All were negative for Brucella.

2. 10 sets of tissues, representing 2 herds, were cultured at the Bozeman Laboratory. 5 were positive for Brucella abortus, Type I (Idaho animals)

F. Miscellaneous

1. Moraxella bovis - 4 bovine cases

V. Virology

A. Virus isolation attempts

1. Bovine - 11 cases; 1 positive BVD

2. Porcine - 6 cases; all negative

CANINE PARVOVIRAL ENTERITIS

Since the start of the "great parvovirus panic of 1980", the Diagnostic Laboratory has confirmed 18 cases of canine parvoviral enteritis by histopathologic examination. One of these cases also had an associated parvoviral cardiomyopathy. The 18 cases have come from 18 different locations throughout the state.

TWO NEW TESTS OFFERED

The laboratory is now offering the Leukassay F test for feline leukemia virus and the MIP test for equine pregnancy determination.

The Leukassay F test is an ELISA (enzyme-linked immunosorbant assay) test for feline leukemia virus group-specific antigen. The sample submitted should be ½ ml of serum or plasma, or a minimum of 1 ml of whole blood (clotted, EDTA or heparin). Samples should be iced (plasma or serum can be frozen). Samples should be submitted with an SV-2A (serology report) form. The cost of the test is $6.50.

The MIP test is a hemagglutination test which detects PMSG (pregnant mare serum gonadotropin). The sample submitted should be 5 ml of serum or 10 ml of clotted blood; serum is preferred. If any delay is expected in getting the sample to the lab, the serum should be removed from the clotted blood because hemolysis will interfere with the test. The MIP test is 97% accurate at 41-45 days of gestation. The earliest possible detection of PMSG is at 35 days and the test is invalid after 100 days. Samples should be submitted with an SV-2A (serology report) form. The cost of the test is $10.50.

ANAEROBIC BACTERIAL CULTURING

The laboratory will be experimenting with some new technics for isolating anaerobic bacteria. Some specific points regarding anaerobic bacteria include:

1. We do not culture intestinal contents for Clostridium perfringens in suspected cases of enterotoxemia. Enterotoxemia is diagnosed by a mouse inoculation test. If enterotoxemia is suspected, the sample submitted should be 30 ml of intestinal (not stomach) content in a clean glass or plastic container. Tied-off intestine is rarely ever adequate.
2. Other Clostridial infections (malignant edema, blackleg, red water) are diagnosed by fluorescent antibody tests and/or cultures. When these diseases are suspected, the samples submitted should include several (2 minimum) air-dried smears prepared from the lesion, a piece of fresh tissue from the lesion, and fixed tissue from the lesion. Primary diagnosis will be by the FA test; anaerobic cultures will be used as a backup.
3. Tetanus and botulism are not diagnosed by culturing.

Culturing for anaerobes other than Clostridia will require special technics for sample collection and submission. If infection with an anaerobe is suspected, please contact the laboratory for information regarding sample submission.

PROLIFERATIVE ILEITIS IN SWINE

We have seen two recent cases of enteritis in swine which have had lesions consistent with proliferative ileitis. This conditon is caused by Campylobacter sputorum subspecies mucosalis. The two cases we have seen have been in weanling pigs, but the disease can also be seen in older animals. The disease has also been called proliferative hemorrhagic enteropathy (in Australia) and intestinal adenomatosis (in England). One of the two cases seen here had an elevated WBC (47,000). Clinically the disease is characterized by diarrhea of sudden onset, but the course may be protracted. The affected animals are growing normally prior to onset of signs. The lesion is usually limited to the ileum, but may extend into the jejunum and colon. Grossly the mucosa is markedly thickened and nodular. In suspected cases of this disease, a tied-off section of ileum should be submitted for culturing along with samples of fixed tissues from all organ systems.

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Here it is newsletter time again and I'm trying to get back on track.

CORRECTION ON PREGNANCY TEST EAR TAG COLOR

Due to circumstances beyond his control Dr. Gus Zancanella informed me that this year's pregnancy test tag has changed color, from yellow to blue. Blue is the in hue this season. (Goes well with basic black and also brown and white prints.)

ANAPHYLAXIS IN BABY CALVES

Recently we received a letter from BAYVET Division of Cutter Laboratories in which they called attention to the old problem of anaphylactic reactions in calves treated with Pasteurella prophylaxis products.

They state that "there appear to be "cycles of fashion" that wax and wane concerning utility of the Pasteurella-prophylaxis procedure especially in young calves.

The trend is toward less frequent use of advice and services by veterinarians, among livestock producers, offset by their own willingness to perform their own services.

If veterinarians are consulted it is usually after the fact (of reaction). Some veterinarians seem not to be aware of the requirements for anaphylaxis to occur, and its wholly biological origins.

Let me firstly introduce to you a profile of typical characteristics, among calves that have undergone an adverse reaction following use of a Pasteurella-containing bacterin. These major premises come from reports received over the last three years:

Typical Field Case and Ancillary Data:

Location: North-Central to Northwest Great Plains: chiefly, Nebraska, No. Dakota, So. Dakota, Montana and Wyoming.

Age of Calves: under 3 months (6-10 weeks, usually).

Producer's admitted familiarity with labeling:

Most have not read, prior to use, and say so; seem to feel little obligation or responsibility.

Warnings, cautions given at point of purchase (dealer etc.), and unheeded:

25-50%

Genetic information:

Common sire for all calves or sires from a single bloodline; most cases.

Availability of antidote:

None purchased, to none on-site but at ranch-house: 10-15% have at hand.

Observation of calves:

Out of sight, out of mind. Either lost in centers of large pens, turned out to pasture, or generally unobserved. Usually found dead hours to a day later if not sighted during handling and immediate reaction.

Definitive Diagnosis:

25%

Other procedures simultaneously:

25% or less. (castration, dehorning, other vaccines, or antibiotics).

DVM called afterward for assistance:

Very few (Note: DVM's usually too far away for prompt, heroic service).

DVM called afterward for consultation:

30-50%

Complete History of herd, incident, and records available for study:

very few

Bacterial Contamination in returned, partially used vials:

20-30% (one needle throughout the herd)

Incidence: Reported cases of anaphylaxis or anaphylactoid reactions can relate to any production lot of a bacteria. Rarely are they multiple, per lot, nor are they cumulative. To carry this still further, all companies manufacturing Pasteurella-containing bacterins are aware of anaphylaxis being reported following use of each of their respective products. The problem is distribution-wide, wherever cattle and Pasteurella bacterins meet.

National Incidence: Of anaphylaxis using a single commercial source of bacterin, in percent, on basis of reactions and deaths per doses sold:

	1978	1979
Deaths	.0058	.002
Reactions (including fatality)	.011	.006

In one year, 618 cases of anaphylaxis following use of three common antibiotics were reported to, and in turn reported by, USDA. How many such cases go unreported? The latter question notwithstanding, this seems a surprising number of anaphylactic reactions following drugs much less pervasive in use of their injectable forms than are bacterins. In that same period, we heard of nothing approaching this magnitude of incidents following Pasteurella-containing bacterins. We in industry get nearly all reports concerning our products, as compared to USDA, as from us redress is often being sought. One may safely conclude, short of exhaustive research, that the profile of antibiotic-anteceded anaphylaxis is coming into sharper focus. This upward trend follows generations of use in the national cow herd, and their importance appears, as result, to have eclipsed that of bacterins.

The following authors have attested to a general increase in anaphylaxis due to multiple and more intensive cattle medication in recent decades: Dr. Donald Mackey (Feedlot Management), Dr. Homer K. Caley (News articles), Drs. R. D. Daniels and Perry Morgan (Beef Magazine), and Dr. John Herrick (Modern Vet Practice).

Review of Literature:

All authors agree that pre-sensitization must have occured at an unspecified time (or times) prior to the trigger dose."

All practitioners should be aware of this problem and be prepared to treat any case of anaphylaxis.

REDUCED DOSAGE OF BRUCELLA VACCINE

As of September 9, 1980, Montana officially adopted the reduced dose of Brucella vaccine. The Board instructed Dr. Glosser to submit an emergency rule change to accomplish this procedure.

The rule states that a 2cc dose containing 300 million to 3 billion live Brucella organisms will be administered to heifers.

The Board took this action so that Montana's 1980 heifer calf crop would be uniformly vaccinated with the reduced dose, thereby eliminating 80 - 90% of the persistent titer problems that plague producers when these cattle are 2 - 3 years old.

APHIS has indicated that they hope to adopt the new dosage October 1, 1980 but Montana feels that it is critical that we not have a calf crop vaccinated half and half, new and old.

Please exercise care in following the dilution schedules you receive for the vaccine you are using. I realize that the dilute vaccine doesn't look as turbid as the old, so don't dose according to the "mud in the water". The clear stuff still has the kick needed.

DAIRY HERD HEALTH SEMINAR

Thursday, November 13, 1980 beginning at 8:30 a.m., registration for the American Dairy Association - Montana Dairy Association Fall Conference will take place at the Village Motor Inn, Red Lion in Missoula.

Of interest to veterinarians will be the session starting at 9:00 a.m., Thursday featuring Dr. John Anderson, a Minnesota Veterinarian, who specializes in Dairy Herd Health Programs.

Ralph Parker informed me that Dr. Anderson will conduct a half day session devoted entirely to problems related to dairy herd health. Dr. Anderson has indicated that any interested practitioners should bring any questions, problems, or difficult case histories to the program and join in the discussion.

Further inquiry may be directed to Ralph Parker, Sun River, or Dr. John Bryant, M.S.U. Dairy Extension Specialist.

RABIES

This year we seem to have a resurgence of rabies in bats and skunks. Lately the laboratory has been receiving up to 22 cases per day comprised of bats, skunks, dogs, etc.

The positive return in bats overall is about 10% but at times the days take is considerably higher.

Along with this the Department has received numerous inquiries from MD's, parents, animal control officers, etc. concerning human and pet exposures throughout the state. Many of these have been weird and bizarre.

A rabid bat in a humane society kennel exposed 40 or 50 dogs and cats resulting in euthanasia of most of the animals and quarantine of a few.

A man stumbled into a brush pile near which a tree containing a bat colony had been felled. He obtained a double puncture wound on his hand and there were fears that a bat might have bitten him.

As reported in the Great Falls Tribune, a child was scratched or bitten by a rabid bat in her bedroom and had to receive anti-rabies treatment.

If we have another warm open winter,the skunk rabies may intensify by next summer.

The lab is doing yoeman duty with the testing of specimens submitted and we are getting a good survey of rabies in bats and skunks.

I. Accessions reported out in August:

	August 1980	August 1979	% change
BOVINE	138	87	58.6%
EQUINE	40	18	122.2%
PORCINE	20	17	17.6%
OVINE	16	10	60.0%
FELINE	19	20	-5.0%
CANINE	67	52	28.8%
AVIAN	14	10	40.0%
WILDLIFE	69	76	-9.2%
MISC.	57	31	83.9%
TOTAL	440	321	37.1%

II. Serology

A. Brucellosis (all species) total sera -- 17,760
   1. Brucellosis routine tests -- 6,652; 29 positive
   2. Quarantine herd tests -- 446, 13 suspects
   3. Slaughter samples -- 10,657; 52 positive
   4. Seminal plasma - Brucellosis -- 5 negative

B. Brucellosis CF tests -- 891

C. Leptospirosis (all species) -- 88 sera
   1. L. pomona -- 5 positive
   2. L. hardjo -- 15 positive
   3. L. icterohemorrhagia -- 16 positive
   4. L. autumnalis -- 2 positive
   5. L. canicola -- 1 positive

D. Bluetongue -- 326 sera; 3 positive

E. Anaplasmosis -- 162 sera; 2 positive

F. IBR -- 68 sera; 5 positive

G. BVD -- 54 sera; 10 positive

H. PI_3 -- 35 sera; 1 positive

I. BLV -- 9 all negative

J. EIA -- 459 sera; 14 positive

K. Pseudorabies -- 100 sera
   1. Routine -- 18 negative; 3 toxic
   2. Slaughter samples -- 62 negative; 17 toxic

III. Rabies

A. 88 requests

1. Human exposure

a. 26 negative

2. No human exposure

a. 59 negative

b. 3 positive (2 skunks and 1 bat)

Skunks -- Daniels county

Bat -- Blaine county

IV. Bacteriology

A. Total

1. 166 accessions processed resulting in 197 isolates

B. Antibiotic sensitivities were run on 147 isolates

C. FAT (Clostridia)

1. 1 positive - Cl. novyi

2. 5 negative

D. Salmonella

1. Salmonella dublin -- 1 bovine case

E. Brucella

1. 11 sets of tissues, representing 8 herds, were cultured at the Bozeman Laboratory. 5 were positive for Brucella abortus, Type I.

2. Tissues from 3 brucellosis reactors from Idaho, representing two herds, were cultured at the Bozeman Laboratory. 2 were positive for Brucella abortus, Type I.

F. Miscellaneous

1. Moraxella bovis -- 2 bovine cases

V. Virology

A. Virus isolation attempts

1. Bovine -- 5 cases; 1 positive BVD
2. Porcine -- 4 cases; all negative

Dr. C. Denis Peterson has joined the laboratory staff as veterinary microbiologist. Dr. Peterson received his D.V.M. degree from Washington State University (1970) and the Ph.D. degree in Biochemistry from Brigham Young University (1979).

For the past ten years Dr. Peterson has been in the Veterinary Corps in the United States Army. His last duty station was Letterman Army Medical Center, San Francisco.

Having been born and raised in the Babb area, Dr. Peterson is happy to be back in Montana.

NOTE: Starting October 1, 1980, Canada will require an agar gel test for bluetongue, but other exportations will have to be tested with the CF test. Therefore, after October 1, 1980, please specify the test required, or supply us with enough information so that we can give you the proper test.

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Animal Health Division
Helena, Montana 59601

M O N T H L Y L E T T E R

SEPTEMBER 1980

NEWSLETTER IS LATE

This month the newsletter is late and there are plenty of excuses. Busy, unscheduled vacation, early frost, lethargy and general unpreparedness. Choose any of the above. We will try and get back on schedule from here on.

ADOPTION OF THE REDUCED BRUCELLA DOSAGE

The Animal Health Division had hoped to be able to officially adopt the proposed reduced dosage of Brucella abortus vaccine on September 1, 1980 and begin vaccination of the 1980 heifer calf crop with the new dosage.

APHIS Veterinary Services in Hyattsville, Maryland has been working toward obtaining a legal waiver to use the presently manufactured vaccine at other than package directions. Dr. Becton has indicated that APHIS is working to announce adoption of the reduced dose effective October 1, 1980, and steps are being taken to prepare for this.

In Montana, and especially this year because of drought conditions in the eastern counties, cattle are moving presently and calves are being vaccinated somewhat earlier than normal. In light of present knowlege related to Strain 19 vaccine, it seems foolhardy to vaccinate any heifer calves with the old dose.

Consequently, the Board instructed Dr. Glosser to amend the definition of an official vaccinate and adopt the reduced dose of Strain 19 Brucella abortus as an emergency rule. If the Board adopts the rule it will be effective on September 15, 1980.

The dosage will be administered according to the instructions that you received from the District Veterinarian in your area.

You are reminded that vaccine used must have been viability counted at the Diagnostic Laboratory and the dilution protocol that you received from the lab should be followed exactly.

REMEMBER! ALL THE VACCINE USED AT THE REDUCED DOSE WILL BE GIVEN IN A 2cc DOSE!

PREGNANCY TEST IDENTIFICATION

Gus says this years color is yellow. Right ear for late calvers, left ear for early calvers.

I. Accessions reported out in July:

	July 1980	July 1979	% change
BOVINE	101	48	110.4%
EQUINE	41	17	141.2%
PORCINE	10	8	25.0%
OVINE	12	3	30.0%
FELINE	11	7	57.1%
CANINE	47	30	56.7%
AVIAN	14	5	180.0%
WILDLIFE	59	40	47.5%
MISC.	38	16	137.5%
TOTAL	333	174	91.4%

II. Serology

A. Brucellosis (all species) total sera -- 18,092
   1. Brucellosis routine tests -- 8,195; 59 positive
   2. Quarantine herd tests -- 874; 49 positive
   3. Slaughter samples -- 9,022; 89 positive
   4. Seminal plasma - Brucellosis -- 1 negative

B. Brucellosis CF tests -- 1,167

C. Leptospirosis (all species) -- 545 sera (480 ovine L. pomona only)
   1. L. pomona; 1 positive
   2. L. hardjo; 3 positive
   3. L. icterohemorrhagia; 12 positive

D. Bluetongue -- 1,394; 1 positive

E. Anaplasmosis -- 366; 4 positive

F. IBR -- 36; 3 positive

G. BVD -- 30; 6 positive

H. PI_3 -- 20; 4 positive

I. BLV -- 27; 2 positive

J. EIA -- 290; 4 positive

K. WEE and EEE -- 4 undetermined

L. Pseudorabies -- 68 sera
   1. Routine tests -- 25; 5 toxic
   2. Slaughter samples -- 43; 2 toxic

III. Rabies

A. 81 requests

1. Human exposure

a. 13 negative

2. No human exposure

a. 63 negative

b. 5 positive (1 bat and 4 skunks)

Bat -- Madison county

Skunks -- Valley, Daniels (3) counties

IV. Bacteriology

A. Total

1. 174 accessions processed resulting in 470 isolates

B. Antibiotic sensitivities were run on 224 isolates

C. FAT (Clostridia)

1. 1 positive - Cl. septicum

2. 2 negative

D. Salmonella

1. Salmonella typhimurium-- 1 bovine milk, 2 equine fecals

2. Salmonella sp. group B -- goat fecal

3. Salmonella sp. group C_1 -- bovine fecal

V. Virology

A. Virus isolation attempts

1. Bovine 7 cases -- IBR - 4 positive;BVD - 2 positive

2. Porcine 9 cases -- all negative

3. Canine 1 case -- negative pseudorabies virus

The laboratory has processed an unusually large number of water samples from eastern Montana that have been high in total dissolved solids, thus making the water unsuitable for livestock use.

Another toxic water problem has been the identification of Anabaena flosaqua in the Nelson Reservoir near Malta.

INFERTILITY IN CATTLE

In suspected cases of infertility in cattle due to Vibriosis (Campylobacteriosis) cervical mucus should be collected from a representative number of open cows or heifers and submitted in transport media to the laboratory for culturing. If necessary the transport media may be obtained from the laboratory.

An alternate way is to send a representative number of cattle to the laboratory where cervical mucus and blood samples are taken. Prior arrangements must be made for this alternative.

A representative sample is required because of developing immunity which will clear a preexisting infection. Natural exposure of the cattle to Campylobacter will produce immunity which may not prevent infertility during the present breeding season, but will clear the infection in 2-3 months.

RESPIRATORY DISEASE IN CATTLE

Samples submitted should include both fresh and frozen sections of involved lung and trachea and formalized sections.

Nasal swabs are also acceptable for viral and bacterial culturing.

Recent vaccination with Nasalgen will produce positive virus isolation for IBR. There is no way to differentiate vaccine virus from the field strain.

PARVOVIRUS IN DOGS

Two cases of parvovirus in dogs were histologically confirmed during the first part of August at the Bozeman laboratory. The dogs were from Billings and Great Falls. Tissue samples must include a freshly fixed section of small intestine for diagnosis.

As a follow-up, watch for sudden death syndrome in young puppies possibly exposed to parvovirus. A perfectly healthly puppy may gasp, cry and die suddenly. Lesions are found in the heart. Tissue sections must include the heart for diagnosis.

BLUE GREEN ALGAE

By the time this reaches you the imminent danger will have passed, but this particular problem occurred right as the last newletter went to press and we missed it then.

In the latter part of July blue green algae (Anabaena floss-aqua) built up in Nelson Reservoir in Phillips county to the point that it was an extreme hazard to livestock.

The algae builds up during warm weather and low water and can be a hazard to anything that drinks the water.

Evidently the first indications of the problem occurred when stock owners bordering the reservoir started reporting sudden losses of cattle at the site. All told about 25 head of cattle and two dogs succumbed to the poisonous plantlife.

Information received from the Department of Health & Environmental Sciences, Water Quality Bureau, indicated that intake of the polluted water in quantities of 30 ml/kg body weight could be lethal. This means that a cow weighing 1100 lbs would only have to drink approximately 4 gallons of water to receive a lethal dose. On a hot day that ain't much water for an old skate.

Dr. Curtis reported that a client had called him and said he had been fencing near the reservoir when he saw a cow and calf walk down to the water, drink, walk away from the shore line and die! It works quickly.

At any rate, keep this in mind for the next summer that is hot, has low water etc.

PARVO VIRUS - DISEASE OF THE MONTH

The newspapers, radio, and TV have adopted parvo-virus in dogs as the current sensation of the month. I don't discount the severity, effects and all the rest, but I do question the assumed morbidity.

Until a month ago the Diagnostic Laboratory had reported only a very few cases, but with the increased interest of practitioners and an increase in suitable submissions, there have been six or eight cases reported out of the laboratory based on histopathiological examination.

There is certainly an increased awareness of the parvo-virus problem and a number of clinical cases have been diagnosed as well as the lab confirmed cases. Practitioners should be cognizant of the disease especially in the larger cities and areas where there might be an increased amount of movement of dogs from other areas.

"The disease, is a gastroenteritis of acute onset and varying morbidity and mortality caused by a parvo-virus that first became a notable problem during the summer of 1978.

Dogs of all ages have been affected, although puppies appear to be more susceptible.

Peracute deaths have been described but more frequently the disease has been characterized by dehydration, inactivity, diarrhea that is liquid and bloody or sometimes liquid and brown, and vomiting. The anterior abdomen is painful when

palpated. The body temperature is normal or subnormal in older dogs and as high as 106° F in pups. After 2 or 3 days of illness in one outbreak some dogs developed a cough and some developed corneal edema.

At present diagnosis is made by the typical histopathologic findings of loss of intestinal mucosal epithelium. The virus can be isolated from feces. A diagnosis based on clinical signs may become possible when more experience is gained with the disease, but the findings of vomiting, anterior abdominal pain, cough, "blue eye", and diarrhea make an outbreak in a kennel difficult to distinguish from infectious canine hepatitis or canine distemper."

From - Merck Veterinary Manual, Fifth Edition.

DR. HOWARD WELCH, PIONEER MONTANA VETERINARIAN

Recently word was received here of the death of Dr. Howard Welch, 98, in Medford, Oregon in March of 1980.

Dr. Welch was born March 14, 1881 at Willimantic, Connecticut. His early years were spent in Columbia, Missouri where he attended the University of Missouri.

After completing his Doctor of Veterinary Medicine work at Cornell University, Dr. Welch practiced in Bozeman until 1914, "when he became head of the Veterinary Department at Montana State College."

The first mention I could find of Dr. Welch in the Montana Livestock Sanitary Board's proceedings is October 1910 when he was listed among a number of veterinarians designated as "current deputy veterinarians".

After 36 years of teaching and biological research at the State College, Dr. Welch retired in 1950. Dr. Welch's work included early research into the use of iodized salt to control goiters, and pioneer developement of tests for bovine tuberculosis.

Dr. Welch was a noted contributor to the Veterinary Profession and Montana for many years. His passing is regretted, but he lived a long and fruitful life.

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M O N T H L Y L E T T E R

AUGUST 1980

IOWA IDENTIFICATION REQUIREMENTS

In recent days we have been getting a number of complaints from the Iowa State Veterinarian's office about health certificates issued by Montana veterinarians.

Each of the complaints is based on "Animals not individually identified." When on the health certificate a description might read "16 head of range feeder heifers 81AJS 8256 through 8273 brucellosis negative."

Since I feel that individual ear tag numbers listed would constitute individual identification, I called that state veterinarian's office to find out what their objection was.

I was informed that Iowa felt that cattle listed only with serial ear tag numbers had very likely lost identity and could not be traced beyond that ear tag.(???) They felt that veterinarians were putting in a serial of new tags rather than correlating to any old ID that might be in the cow, thereby stymying Iowa's attempts at traceback.

In further conversation, the doctor told me that if they received a copy of the test chart along with the copy of the health certificate that is sent to the state veterinarian at destination, then they could accept serial ear tag series as identification.

In this matter they felt that on the test chart all the information such as sex, age, description, etc. and other visible identification such as ear tag and back tag numbers would be cross correlated.

This gets a little tangled and convoluted, but I'd like to keep you fellows, sending cattle to Iowa, out of trouble.

At any rate this increasing bicker and squabble about identification problems seems to always arise from states without brand laws and no means of tracing to original ownership.

In order to protect yourselves a word to the wise:

Make sure you send a copy of the test chart with the copy of the health that goes to the state veterinarian at destination. And, Oh horrors, if you should send a set of cattle to Iowa in which there is only your set of serial ear tags, you very likely will have to explain to that state that we do have cattle in Montana that are born without ear tags and live all their lives until selling to an Iowa buyer before the first tag is placed in an ear.

THE REDUCED DOSAGE OF BRUCELLA ABORTUS

July 16 & 17, 1980 the Brucellosis Committee of the U.S. Animal Health Association met in Kansas City, Missouri to accept a report by Dr. Billy Deyoe et. al. concerning the efficacy of a reduced dosage of Brucella abortus vaccine.

Dr. Deyoe's report stated that based on data gathered in two experiments in which cattle were vaccinated with reduced cell counts of Brucella abortus he recommends that the viable cell count be reduced in each dose of vaccine administered.

His experiments involved one group of cattle that averaged 12 months of age (11-13 mo.) and another group was comprised of calves 4-6 months of age (average 5 mo.).

A variety of dosage levels were administered to each group and when the data resulting from challenge was analysed he found that an adequate immunity in cattle from 4-12 months of age was stimulated by dosages ranging from 3×10^8 to 3×10^9 live cells per dose. This is 300 million to 3 billion cells. The present dose at reconstitution must contain a minimum of 50 billion live cells.

The sub-committee that has been handling matters pertaining to the reduced dosage submitted a resolution recommending that USDA change the UM & R to allow heifer calves to be vaccinated for Brucellosis with a reduced dose of vaccine from 4-12 months of age. The reduced dose should contain 1 billion cells but may range from 300 million to 3 billion. They recommend that the reduced dose be adopted by states that are able to do viability counts and calculate dilution schedules as soon as possible and not later than January 1, 1981.

Dr. Paul Becton of APHIS, Veterinary Services indicated that it will take some time to get the legal status, of using present commercial vaccine at a reduced dose, clarified and felt that it will probably be September 1, 1980 before that is done.

In the meantime Montana is going ahead with plans to gear up for viability counting and calculating dilution schedules. As I stated in the newsletter last month, the Animal Health Division is going to distribute some Brucella abortus vaccine to practitioners, free of charge, and a dilution schedule will be enclosed with each shipment.

Any brucella vaccine that is privately purchased will also have to be used at the reduced dosage. In order to get the dilution schedule the Diagnostic Laboratory will have to receive representative samples from each lot number of each manufacturer so that viability counts can be made, and the protocol for dilution calculated.

This monumental step in the Brucellosis Control Program is finally going to be taken, albeit 25 years late. All of us, will of necessity, need to take extreme care in using the vaccine, as it should be. From here on out this unreasonable problem of contending with vaccinal titers should dwindle to a minimum.

In the course of the next couple of months each practitioner will be contacted by the District State Veterinarian or Federal Veterinary Medical Officer in your area, so that complete explanations can be made and questions can be answered about this new reduced dosage.

This procedure, the use of the reduced dose, is probably one of the greatest aids that a practitioner can give to a client and it deserves to be done properly. Strict adherence to the dilution protocol will be observed and all Brucella abortus vaccine administered in the state of Montana after the approved date will be administered in the reduced dose.

It would be criminally negligent to administer the old full dose after that cut off date.

We are hoping that APHIS will notify us that we can begin using the new dose September 1, 1980.

Until then remember the present dosage contains 50 billion live cells per dose and the new dose will contain a maximum of 3 billion live cells.

If you have to inoculate calves prior to the adoption of the new dose be sure that the owner is aware of possible problems with the old dose and be sure that he is aware of the advantages of waiting until the new dose can be used.

Don't over vaccinate!

Addendum: When you order vaccine from the Diagnostic Laboratory, order the number of dosages that you feel that you will use. The lab will send you the amount of vaccine that will be diluted to reach your requested numbers.

REMEMBER, THE VACCINE WILL HAVE TO BE USED THE DAY IT'S DILUTED. DO NOT HOLD OVER PARTIAL BOTTLES OF DILUTE VACCINE!

E.I.A. REACTOR INCIDENCE

In the past year there have been 19 EIA reactors diagnosed in the state. Several have been in horses tested in Montana, (but of other state's origin) for shipment to Canada.

Some are our own home grown clinical variety.

Since we have no legal requirement on these animals this information is strictly for your use in advising clients in the course of your practice.

Many of you will remember the hue and cry to adopt a Coggins test requirement, then after it was adopted an even greater hue and cry was raised to rescind it. Which brings us to the present and B.H.&C. (Before Hue & Cry).

Month	County	#Positive
August 1979	Gallatin	1
September	Ravalli	1
September	Stillwater	1
October	Toole	2
November	Lewis & Clark	4
December	Toole	1
January 1980	Toole	1
February	Powell	1
February	Stillwater	1
March	Gallatin	2
June	Lewis & Clark	3
June	Teton	1
Total		19

I. Highlights of fiscal year 1980

A. Case Accessions - SV 43's Increases/decreases

	FY 1979	FY 1980	% change
BOVINE	2210	2590	17.2%
EQUINE	429	453	5.6%
PORCINE	195	251	28.7%
OVINE	194	226	16.5%
FELINE	176	200	13.6%
CANINE	507	557	9.7%
AVIAN	95	90	-5.3%
WILDLIFE	267	356	33.3%
MISC.	327	342	4.6%
TOTAL	4400	5065	15.1%

B. Brucellosis (all species) total sera -- 377,290
   1. Routine tests -- 245,612; 601 positive
   2. Quarantine herd tests -- 14,038; 338 positive
   3. Slaughter samples -- 117,509; 794 positive
   4. Seminal plasma -- 131; all negative
   5. CF tests -- 3,461

C. Leptospirosis (all species) -- 3,296 sera
   1. L. pomona -- 368 positive
   2. L. hardjo -- 151 positive
   3. L. icterohemorrhagia -- 155 positive
   4. L. grippotyphosa -- 65 positive
   5. L. autumnalis -- 120 positive
   6. L. canicola -- 1 positive
   7. L. tarassovi -- 7 positive

D. Bluetongue -- 4,370; 15 positive

E. Anaplasmosis -- 3,224; 61 positive

F. IBR -- 1,575; 391 positive

G. BVD -- 1,412; 146 positive

H. PI_3 -- 666; 212 positve

I. Equine Infectious Anemia -- 4,219; 27 positive

J. WEE and EEE -- 67; 15 positive (WEE)

K. Bovine Leukemia Virus -- 117; 3 positive

L. Pseudorabies -- total sera 1,634

1. Routine tests -- 754; 3 toxic
2. Slaughter samples -- 880; 10 positive

M. Rabies Tests

1. 553 requests
   a. Human exposure
      1. 3 positive (1 bovine, 1 canine, 1 skunk)
      2. 217 negative
   b. No human exposure
      1. 37 positive (19 bats, 18 skunks)
      2. 296 negative
2. Counties with positive rabies

Cascade	Ravalli	McCone
Yellowstone	Richland	Carter
Missoula	Powell	Liberty
Flathead	Sheridan	Mineral
Fergus	Daniels	North Dakota
Carbon	Fallon	

N. Bacteriology

1. 2,831 accessions processed resulting in 3,700 isolates.
2. Antibiotic sensitivities were run on 2,823.
3. Bacteriologic tests done on 55.89% of total case accessions.
4. Salmonella isolates - 56
   1. 5 Sal. alachua - avian
   2. 2 Sal. cholerasuis - porcine
   3. 17 Sal. dublin - bovine
   4. 1 Sal. eimsbuettal - porcine
   5. 1 Sal. heidelberg - bovine
   6. 1 Sal. kottbus - equine
   7. 1 Sal. senftenberg - avian
   8. 2 Sal. tennessee - 1 equine, 1 avian
   9. 1 Sal. thomasville - avian
   10. 2 Sal. thompson - 1 ovine, 1 avian
   11. 23 Sal. typhimurium - 19 bovine, 3 equine, 1 avian

O. Miscellaneous Tests

1. Electron Microscopy
   a. 200 fecal samples
      1. Coronavirus -- 43
      2. Rotavirus -- 24
      3. Coronavirus and rotavirus -- 1
      4. Negative -- 132
2. Infant Mouse Test for Enteropathogenic E. coli
   a. 95 tests run
      1. 34 positive
      2. 44 negative
      3. 17 inconclusive

3. Gut Loop Test for Enteropathogenic E. coli
   a. 106 tests run
      1. 90 positive
      2. 16 negative

P. Virus Isolation

1. 236 virus isolation attempts were performed; 163 from bovine species.

In cases of suspected toxicoses relative to farm chemicals or pesticides, veterinarians can obtain valuable investigational assistance from the Montana Department of Agriculture, Environmental Management Division, Helena, MT, Gary Gingrey, 449-2944.

NOTICE: Please note the change in the date of the Fourth Annual Veterinary Symposium - September 19, 1980, Friday. Subject - Bovine Virology

Compendium of Animal Rabies Vaccines, 1980

Prepared by: The National Association of State Public Health Veterinarians, Inc.

Part II: Vaccines Marketed in the U.S. - 1980

Vaccine: Generic Name	Produced By	Marketed By (Product Name)	For Use In	Dosage*	Age at Primary** Vaccination	Booster Recommended
A) MODIFIED LIVE VIRUS						
Canine Cell Line Origin High Egg Passage, Flury Strain	NORDEN License No. 189	Norden (Endurell-R)	Dogs	1 ml	3 mos. & 1 yr. later	Triennially
			Cats	1 ml	3 months	Annually
Porcine Tissue Culture Origin High Cell Passage, SAO Strain	JENSEN-SALSBERY License No. 107	Jensen-Salsbery (ERA Strain Rabies Vaccine)	Dogs	1 ml	3 mos. & 1 yr. later	Triennially
			Cattle	1 ml	4 months	Annually
			Horses	1 ml	4 months	Annually
			Sheep	1 ml	4 months	Annually
			Goats	1 ml	4 months	Annually
Canine Tissue Culture Origin High Cell Passage, SAO Strain	PHILIPS ROXANE License No. 124	Bio-Ceutic (Neurogen-TC)	Dogs	1 ml	3 mos. & 1 yr. later	Triennially
Canine Tissue Culture Origin High Cell Passage, SAO Strain	PHILIPS ROXANE License No. 124	Bio-Ceutic (Unirab)	Dogs	1 ml	3 months	Annually
Canine Tissue Culture Origin High Cell Passage, SAO Strain	PHILIPS ROXANE License No. 124	Pitman-Moore (Rebvax)	Dogs	1 ml	3 mos. & 1 yr. later	Triennially
Bovine Kidney Tissue Culture Origin High Cell Passage, SAO Strain	PITMAN-MOORE License No. 264	Pitman-Moore (Rabies Vaccine)	Dogs	1 ml	3 months	Annually
Hamster Cell Line Origin High Cell Passage, Kissling Strain	BEECHAM License No. 225	Beecham (Rabtect)	Dogs	1 ml	3 months	Annually
B) INACTIVATED VACCINES						
Murine Origin	ROLYNN License No. 266	Ft. Dodge (Trimune)	Dogs	1 ml	3 mos. & 1 yr. later	Triennially
			Cats	1 ml	3 months	Annually
Murine Origin	ROLYNN License No. 266	Ft. Dodge (Annumune)	Dogs	1 ml	3 months	Annually
			Cats	1 ml	3 months	Annually
Murine Origin	DDUGLAS License No. 266	Dougles (SMBV)	Dogs	1 ml	3 months	Annually
			Cats	1 ml	3 months	Annually
***Murine Origin	DOUGLAS License No. 266	Dougles (Pan-Rab)	Cats	1 ml	3 months	Annually
Hamster Cell Line Origin High Cell Passage, Kissling Strain	BEECHAM License No. 225	Beecham (Rabcine)	Dogs	1 ml	3 months	Annually
			Cats	1 ml	3 months	Annually
Hamster Cell Line Origin High Cell Passage, Kissling Strain	BEECHAM License No. 225	Beecham (Rabcine-Feline)	Cats	1 ml	3 months	Annually
Hamster Cell Line Origin	VACCINES, INC. License No. 227	Bendy (Rabies Vacc)	Dogs	1 ml	3 months	Annually

ALL VACCINE MUST BE ADMINISTERED INTRAMUSCULARLY AT ONE SITE IN THE THIGH

****Three months is the earliest age recommended. Dogs vaccinated between 3-12 months should be revaccinated one year later.**

*****Combination vaccine.**

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MONTHLY LETTER

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MONTHLY LETTER

JULY

DISTRIBUTION OF VACCINE FOR REDUCED BRUCELLA DOSAGE

As it was announced at the MVMA meeting in Kalispell, Veterinary Services USDA is expected to announce the adoption of the reduced dosage of Brucella abortus vaccine at the mid July meeting in Kansas City, Missouri of the USAHA Brucellosis Committee.

In order to be able to use the reduced dosage for vaccination of the 1980 heifer calf crop, this fall, the Department of Livestock, Animal Health Division is gearing up to obtain Brucella abortus vaccine, through the federal government, for distribution with a dilution schedule to regularly accredited and deputized veterinarians in Montana.

Since dilution of each lot of vaccine will depend on cell viability counts done at the Diagnostic Laboratory in Bozeman, a schedule that will apply only to that particular lot number of vaccine will be sent out with each shipment. It is then the responsibility and duty of the administering veterinarian to follow directions and dilute properly and then properly inject the heifers.

Because 5 dose vials are the smallest present packages available and the dilution will result in a relatively large number of dosages from each vial, practitioners are advised this is absolutely necessary to properly dispose of remaining vaccine at the end of each day and not carry over excess vaccine. Since the reduction in cells per dosage is 20 to 40 times, the viability of those cells could be tremendously affected if reconstituted vaccine were to be carried over from day to day.

The reduction of the dose of Brucella abortus vaccine will, in my opinion, do more to alleviate the untenable titer problems associated with the Brucellosis Program than any other single thing that could be done.

It will take some time before the manufacturers of Brucellosis vaccine are able to incorporate the reduced cell count in their normal packaging and it is for this reason that the Animal Health Division is trying to start this year with the dilution scheme.

Any vaccine now on hand or ordered through private channels will also be subject to viability counts for use at the reduced doses. The only caution I might extend is that when you order vaccine, remember that a present 20 dose vial will probably dilute out so there will be 400 or more doses from the one vial.

At any rate the greatest service you as practicing veterinarians can do for your clients in the Brucellosis program is to make certain that each and every heifer that you vaccinate receives the reduced dosage of 3 billion cells of B. Abortus Strain 19.

With administration of this dosage I personally feel that the chronic problem we now face, seeing persistant titers in 2 and 3 year old heifers, will be gone in two years. This time will allow the heifers vaccinated with an old excessive dose to recede and get past the age when hundreds of them, no thousands of them, continue to plague the cattle industry with high titers that are caused by a decent vaccine poorly used.

It's almost inconceivable that such a simple step has been so actively avoided (officially) for so long when so many knew the solution to the problem.

I can actually forsee when many of us could even forget how to spell Brucellosis, problems associated with it will be so rare!

SLEEPING SICKNESS

We are approaching the Encephalomyelitis season again and veterinarians should be advising clients about immunization of horses.

Also remember that equine enclphalitides are reportable diseases. Any veterinarian clinically diagnosing Eastern or Western Equine Encephalomyelitis should contact this office immediately on finding signs of these diseases.

Assistance from this office will be available to any veterinarian requesting backup on diagnosis and laboratory aide is available for serological conformation.

HUMAN DEPLOID CELL STRAIN RABIES VACCINE

The Preventive Health Services Bureau of the Department of Health and Environmental Sciences has notified the Animal Health Division that the new human deploid cell strain (HDCS) rabies vaccine will now be available, for use in treating post exposure high risk human patients, through that Bureau.

It appears that vaccine supplies will be somewhat limited initially, consequently patients at high risk will receive preference over low risk and pre-exposure immunization patients.

This year skunk rabies has been very evident in the eastern counties in Montana with 20 cases reported since January 1, 1980.

All veterinarians are cautioned to exercise extreme care in handling wild animals, encephalitic cases, and other possible rabies sources.

IDAHO'S MANDATORY BRUCELLOSIS VACCINE

In conversation with Dr. Greg Nelson, Idaho State Veterinarian, he informed me that Idaho has now adopted a mandatory brucellosis vaccination law.

Female bovines cannot be imported into Idaho unless they are officially Brucellosis vaccinated. Non vaccinates may be imported by permit to certified feedlots to be fattened for slaughter, and to auction markets for sale to slaughter or to certified feed yards. No exceptions will be made.

It will behoove Montana practitioners to be very careful sending cows and heifers to Idaho.

DIAGNOSTIC LABORATORY NEWS

I. Accessions reported out in May:

	May 1980	May 1979	% change
BOVINE	333	280	18.9%
EQUINE	74	65	13.8%
PORCINE	25	15	66.6%
OVINE	48	42	14.3%
FELINE	17	8	112.5%
CANINE	50	40	25.0%
AVIAN	7	13	-46.2%
WILDLIFE	32	19	68.4%
MISC.	45	33	36.4%
TOTAL	631	515	22.5%

II. Serology

A. Brucellosis (all species) total sera -- 29,127
   1. Brucellosis routine tests -- 19,390, 84 positive
   2. Quarantine herd tests -- 643, 19 positive
   3. Slaughter samples -- 9,086, 24 positive
   4. Seminal plasma - Brucellosis -- 8 negative

B. Brucellosis CF tests -- 1,486

C. Leptospirosis (all species) -- 373 sera
   1. L. pomona; 22 positive
   2. L. hardjo; 22 positive
   3. L. icterohemorrhagia; 13 positive
   4. L. grippotyphosa; 4 positive
   5. L. autumnalis; 7 positive

D. EIA -- 358 sera, 1 positive

E. Bluetongue -- 227 sera (negative)

F. Anaplasmosis -- 302 sera, 28 positive

G. IBR -- 145 sera, 29 positive

H. BVD -- 152 sera, 23 positive

I. PI_3 -- 17 sera, 8 positive

J. Pseudorabies -- 148 sera
   1. Routine tests -- 26 (negative)
   2. Slaughter samples -- 122 sera, 3 positive

K. BLV -- 15 sera, 2 positive

III. Rabies

A. 55 requests
   1. Human exposure
      a. 24 negative
   2. No human exposure
      a. 21 negative
      b. 10 positive (4 bats and 6 skunks)
         Bats -- Yellowstone, Flathead, Fergus and Richland counties
         Skunks -- Sheridan (2), Daniels, Carter (2), and Liberty counties

IV. Bacteriology

A. Total
   1. 307 accessions processed resulting in 314 isolates

B. Antibiotic sensitivities were run on 257 isolates

C. FAT (Clostridia)

   1. 1 positive - Cl. chauvoei
   2. 5 negative

D. Mouse inoculation for enterotoxemia

   1. 10 negative

E. Salmonella

   1. Salmonella sp. - 1 bovine and 1 avian case (presently being typed by NVSL)
   2. Salmonella tennessee - 1 avian case
   3. Salmonella typhimurium - 3 bovine cases, 2 equine cases and 1 avian case

F. Brucella

   1. 1 set of tissues was cultured at the Bozeman Laboratory. It was negative.

G. Miscellaneous

   1. Campylobacter fetus subspecies jejuni from an ovine fetal stomach contents
   2. Erysipelothrix rhusiopathiae - porcine case

V. Virology

A. Virus isolation attempts

   1. 31 cases (25 bovine and 6 porcine), all negative

NOTE: The Fourth Annual Veterinary Symposium will be held on Friday, September 12, 1980, at Montana State University, Bozeman, Montana.

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MONTHLY LETTER

JUNE
~~MAY~~ 1980

REDUCED DOSE OF BRUCELLOSIS VACCINE

As a result of conversations held with members of APHIS Veterinary Services, Hyattsville, MD, the Montana State Veterinarian was assured that the adoption of the reduced dosage of Brucella vaccine will be announced at the July meeting of the USAHA Brucellosis Committee.

If, in fact, this monumental step is taken by APHIS, the problems associated with residual vaccinal titers in two year old heifers and short three year old cows will virtually disappear within 2 years.

It is my personal opinion that this particular step is at least 30 years overdue, since the overwhelming dose of vaccine has caused untold millions of dollars in loss due to unnecessary condemnation of vaccinated animals and wasted time spent by regulatory people in chasing vaccinal titers and testing herds to eliminate any vestige of vaccinal titers.

At any rate the Animal Health Division is gearing up to be able to conduct viable cell counts on each lot of Brucella vaccine produced and then work out dilution schedules that will give a constant dose of three billion live cells.

These dilution protocals will be sent out with each order of vaccine to a practitioner and it will be up to the practicing veterinarian to dilute the vaccine according to the directions and administer the vaccine.

Any veterinarian that fails to heed the dilution protocal applicable to a particular lot of vaccine, will be doing the greatest of disservices to his client, because the use of the reduced dose will alleviate the chronic objection that has been with the Bang's program since its inception.

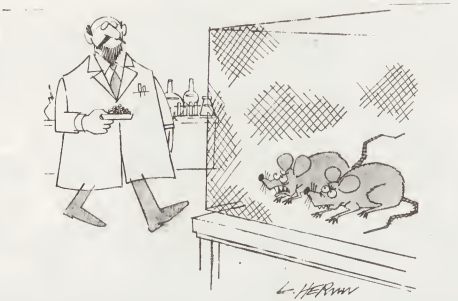
Finally the one intelligent step that could have been taken years ago, to eliminate the conflict between increasing the resistance of the nations cow herd while still being able to use a test program, is going to be taken.

Now the most vehement critics of Brucellosis vaccination can use the stuff and be assured that finally at least one basic principle of immunology is being used in the program.

Eh! Paul and Jack.

EDITORIAL COMMENT

In view of a long line of government sponsored calamities, ie. DDT, 245T, DES, PCB, cigarettes, etc, we offer the following comment:



"I wish they'd vary the menu around here— I'm sick and tired of carcinogens!"

THE AMERICAN LEGION MAGAZINE

MOUNT ST. HELEN'S VOLCANIC ASH

The eruption of Mount St. Helens in the State of Washington on May 18th, with a resultant volcanic ash fallout in the state of Montana, has caused considerable concern. This office has received numerous calls as to the chemical composition of the particulate matter and its potential for adverse health affects to livestock and other animals. On May 20, 1980, the Montana Department of Agriculture collected a sample of the particulate matter and performed a chemical analysis of the fallout. Table 1 is the result of this analysis. In addition, the particulate size of silica element has been determined to be 2.4 microns in size and is 5 spheroidal in nature.

The prolonged intake of heavily contaminated feed stuffs possibly could lead to some toxicities.

At any rate, if nothing else you are now armed with a unique conversation piece. You can't ever tell when the composition of Mount St. Helen's ash might come up in the course of cocktail conversation.

Here it is:

MONTANA DEPARTMENT OF AGRICULTURE

May 20, 1980

ASH ANALYTICAL RESULTS
Performed by Laboratory Bureau

PH - 5.5, 5.7, 6.5 average 5.9 (about the same as distilled water)

MAJOR ELEMENTS	PERCENT FOUND	PERCENT AS OXIDE		PPM
Silica	32.5	69.5	SiO_2	695,000
Aluminum	4.6	8.7	Al_2O_3	87,000
Iron	3.3	4.7	Fe_2O_3	47,000
Magnesium	1.5	2.5	MgO	25,000
Potassium	0.53	0.64	K_2O	6,400
Calcium	0.41	0.57	CaO	4,100
Total Sulfur	0.30	0.9	SO_4	3,000
Phosphorus	0.17	0.39	P_2O_5	1,700
Sodium	0.12	0.16	Na_2O	1,200
Total Nitrogen	0.09	---	---	900

TRACE ELEMENTS	PERCENT FOUND	PPM
Florine	0.0120	120
Chromium	0.0120	120
Nickel	0.0096	96
Cobalt	0.0075	75
Manganese	0.0052	52
Copper	0.0026	26
Zinc	0.0016	16
Arsenic	0.00058	5.8
Selenium	0.00013	1.3
Mercury	0.000005	0.05

NONE DETECTED	PPM
Boron	< 700
Nitrate-Nitrogen	< 500
Molybdenum	< 75
Lead	< 10
Cadmium	< 0.2

HIGH SERUM LEVELS OF POLYCHLORINATED BIPHENYLS DUE TO INGESTION OF CONTAMINATED BEEF

In May 1979, 54 cattle from a herd of 168 died after arriving at a Kansas feed lot. Investigations by local health authorities revealed polychlorinated biphenyl (PCB) levels in fat of 150-2200 parts per million (ppm) in specimens obtained at necropsy. The cattle belonged to a farmer who had mixed the insecticide toxaphene with waste oil to make a backrub for these animals. Oil samples from 6 drums on the farm revealed the PCB was composed of from less than 1% to 95% Aroclor 1260. The drums were traced to a defunct electrical company in Kansas. Soil samples from the pen in which the backrub was applied revealed PCB concentrations of 110-1000 ppm. Investigators took blood samples from members of 5 families who had consumed substantial amounts of meat from cattle in this herd in the past year. Eleven persons from 3 families gave blood samples; concentrations of PCB ranged from 10 to 365 parts per billion (ppb) and correlated with the amount of meat consumed. The levels are the highest recorded human levels associated with foodborne PCB exposure in the United States. To date, none of the 11 individuals have suffered apparent health effects; results of liver function tests and of serum cholesterol analyses were within normal limits for all. All cattle in the contaminated herd were disposed of in a toxic-waste site, as was the contaminated soil.

Source: Andrew A. Vernon, M.D. presented the above paper at the 1980 EIS Convention, CDC, U.S. Public Health Service.

COGGINS TEST REQUIREMENTS

We seem to be getting an inordinate number of bombs back from California stating that numerous veterinarians in Montana are writing healths on horses going to California without complying with that states Coggin's test requirement. When you send a horse to California, be sure you write the Coggins test results on the face of the health. Many times no copy of the test ever accompanies the health to that state office. Consequently, they don't think the test requirement has been complied with when in fact it might have been. The Coggins Test must be done within 6 months of import.

VIRAL DISEASES

Bovine Leukemia

At the Bovine Leukosis Symposium sponsored by the U.S. Department of Agriculture and held in College Park, Maryland, May 22-28, 1979, Dr. Glyn Caldwell, Chief of the Cancer Branch, Chronic Diseases Division, Bureau of Epidemiology, Center for Disease Control presented a paper on public health studies of bovine leukemia virus (BLV). Some of the issues he presented are summarized here.

BLV is one of the better known animal tumor viruses. Numerous studies have been conducted in recent years to assess the potential public health significance of this virus. Because of its widespread distribution in livestock, man is at high risk of exposure to this tumor virus. Cattlemen are at high risk of exposure through handling infected livestock and the general public is exposed

through consumption of meat and milk. Epidemiologic studies have been conducted to assess the risk of cancer in persons who are in close contact with BLV infected livestock or products of BLV infected animals. For example, BLV has been found in milk for human consumption, the virus has been transmitted to other animals by ingestion of infected milk, and the virus has been shown to replicate in human cell culture systems. However, despite extensive use of raw milk by farm families with BLV-positive herds, seroepidemiologic studies of these families have shown no evidence of transmission of the virus to humans, even if consumption of infected milk begins in infancy and continues throughout life.

Similarly, studies have been conducted in known cancer patients to assess their risk of exposure to BLV-infected products as compared with the risk of exposure in non-cancer patients.

None of these epidemiologic studies have shown any significantly increased risk of cancer associated with exposure to bovine virus.

In the various seroepidemiologic studies conducted, all serum specimens from humans tested thus far have been BLV-negative irrespective of their status as cancer patients or their risk of exposure to infected animals or animal products. No human serum has ever been found to contain anti-BLV antibody.

Since it is possible that constitutionally humans cannot react to BLV, experimental studies were done with chimpanzees, which represent close evolutionary models for humans. The study, conducted at Emory University's Yerkes Primate Center, was designed to simulate raw milk ingestion by human infants.

Twelve chimpanzees were removed from their mothers at birth, nursed separately, and fed either an unpasteurized BLV-containing milk or a prepared infant formula. Hematologic changes were noted in 2 animals fed BLV containing milk at days 119 and 200. The 2 animals became anorectic, febrile, and anemic and developed pneumonia at 28 and 40 weeks, respectively; they were treated with broad-spectrum antibiotics, vitamins, and corticosteroids. Pneumocystis carinii was diagnosed, and the chimps were treated with pentamidine isethionate. The animals died at 33 and 46 weeks, respectively. The bone marrow, peripheral blood picture, and other autopsy findings for both animals were indistinguishable from leukemia and were consistent with Di Guglielmo syndrome (erythroleukemia). These findings were confirmed by outside consultants. However, neither the virus nor anti-BLV anitbody was found.

Pneumocystis usually occurs only in debilitated or immunosuppressed hosts and has caused pneumonia in children with leukemia. The Pneumocystis pneumonia which was the direct cause of death in these animals may have occurred because of immunosuppression secondary to the disease, the treatment, or both, but should not be considered confirmation that the disease was leukemia. However, if the disease is truly an erythroleukemia as claimed, that it developed as a direct result of BLV ingestion remains a moot point since none of the other chimpanzees developed antibodies. Also, no virus particles were seen by electron microscopy in surviving milk-fed or control animals, and the chimps with leukemia died before they could be tested.

According to researchers at the Yerkes Primate Center, the remaining animals continue to do well, and no other cases of leukemia have occurred in the remaining BLV-fed animals or the controls.

Other investigators have attempted to transmit BLV to chimpanzees by parenteral injection, but these animals developed anti-BLV antibodies. Repeated attempts to reisolate BLV failed.

Since BLV is 1 of 2 or 3 animal leukemias transmitted naturally rather than just artificially in the laboratory, the concern for humans remains. Is there a risk? BLV can replicate in human cells in culture, it can be found in humans' food and environment, but is it a health hazard?

In serologic tests, researchers have been unable to demonstrate antibody to BLV in human serum, while with the same tests they were readily able to identify the BLV antibody in positive animal-control serum. The tests are specific and sensitive enough so that if human antibody exists it would have been detected. It is possible that humans are unable to react to BLV.

Since chimpanzees, subhuman primates, develop detectable antibody to BLV, humans ought to react similarly. However, the serum of some mammals appear to actively destroy oncornaviruses, and if this mechanism works against BLV in humans, it could account for the lack of antibody, isolative virus, and apparent lack of transmission, even though adequate contact for transmission has been present.

BLV is a naturally transmitted oncornavirus that can be transmitted in cattle herds, across species barriers to sheep, and perhaps to subhuman primates. Apparently adequate serologic tests that are sensitive and specific have failed to demonstrate infection in humans despite close contact with BLV-infected herds and ingestion of raw milk from these animals. Therefore, bovine leukemia virus does not appear to represent a public health hazard for humans.

Source: CDC Veterinary Public Health Notes, March 1980.

DIAGNOSTIC LABORATORY NEWS

I. Accessions reported out in April:

	April 1980	April 1979	% change
BOVINE	462	336	37.5%
EQUINE	55	64	-14.1%
PORCINE	21	21	
OVINE	49	50	- 2.0%
FELINE	14	12	16.6%
CANINE	44	37	18.9%
AVIAN	13	7	85.7%
WILDLIFE	10	15	-33.3%
MISC.	33	33	
TOTAL	701	575	21.9%

II. Serology

A. Brucellosis (all species) total sera -- 19,982
   1. Brucellosis routine tests -- 11,506, 3 positive
   2. Quarantine herd tests -- 338, 3 positive
   3. Slaughter samples -- 8,122, 35 positive
   4. Seminal plasma - Brucellosis -- 16 negative

B. Brucellosis CF tests -- 431

C. Leptospirosis (all species) -- 378 sera
   1. L. pomona, 20 positive
   2. L. hardjo, 9 positive
   3. L. icterohemorrhagic, 24 positive
   4. L. grippotyphosa, 9 positive
   5. L. autumnalis, 10 positive
   6. L. canicola, 1 positive

D. EIA -- 454 sera (negative)

E. Bluetongue -- 466 sera (negative)

F. Anaplasmosis -- 339 sera (negative)

G. IBR -- 223 sera, 46 positive

H. BVD -- 225 sera, 34 positive

I. PI_3 -- 122 sera, 38 positive

J. Pseudorabies -- 147 sera (negative)
   1. Routine tests -- 92 sera
   2. Slaughter samples -- 55 sera

K. BLV -- 16 samples (negative)

III. Rabies

A. 24 requests
   1. Human exposure
      a. 8 negative
   2. No human exposure
      a. 10 negative
      b. 6 positive (skunks) 2 - Sheridan, 2 - Daniels, 2 - Carter

IV. Bacteriology

A. Total
   1. 539 accessions processed resulting in 788 isolates

B. Antibiotic sensitivities were run on 510 isolates

C. FAT (Clostridia)
   1. 10 positive - Cl. novyi (5), Cl. septicum (5)
   2. 8 negative

D. Mouse inoculation
   1. 1 positive, Clostridium perfringens, type C, enterotoxemia
   2. 21 negative

E. Salmonella
   1. Salmonella dublin - 3 bovine cases
   2. Salmonella thompson - 1 avian case
   3. Salmonella typhimurium - 10 bovine cases

F. Brucella
   1. 10 sets of tissues, representing 7 herds, were cultured at the Bozeman Laboratory. 2 were positive for Brucella abortus, Type I.
   2. 3 sets of tissues, representing 2 herds, were cultured at NVSL, Ames, Iowa. 2 were positive for Brucella abortus, Strain 19.

G. Infant Mouse Test for Enteropathogenic E. coli
   1. 50 tests run
      a. 9 positive
      b. 34 negative
      c. 7 inconclusive

H. Gut Loop Test for Enteropathogenic E. coli
   1. 106 tests run
      a. 90 positive
      b. 16 negative

I. Miscellaneous
   1. Campylobacter fetus subspecies fetus from 2 ovine fetal stomach contents
   2. Campylobacter fetus subspecies intestinalis from 1 ovine fetal stomach contents
   3. Erysipelothrix rhusiopathiae - porcine case

V. Virology

   A. Virus isolation attempts
      1. 42 cases (35 bovine and 7 porcine)
         a. 1 positive bovine BVD case

VI. Electron Microscopy

   A. 35 samples tested
      1. Coronavirus -- 2
      2. Rotavirus -- 7

Dr. Larry L. Stackhouse will be joining the laboratory staff July 1, 1980, as Veterinary Pathologist and Assistant Bureau Chief. Dr. Stackhouse received his D.V.M. degree from Ohio State University (1963) and the Ph.D. degree in Veterinary Pathology from Colorado State University (1970). He is married and has two children.

For the past nine years Dr. Stackhouse has been director of the Veterinary Diagnostic Laboratory and Professor of Animal Sciences at the University of New Hampshire, Durham, NH.

We at the Diagnostic Laboratory are looking forward to his arrival.

Interviews are in progress for the Veterinary/Microbiologist position. It is hoped that the position will be filled shortly.

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MAY 1980

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STATE OF MONTANA
DEPARTMENT OF LIVESTOCK
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MONTHLY LETTER

~~APRIL~~ MAY 1980

CURRENT SCABIES REPORT

In the late afternoon of March 19, 1980 this office was informed by the North Dakota State Veterinarian that there was an outbreak of psoroptic scabies in one of their south-western counties.

Efforts were undertaken by this department to prepare to contend with imports of exposed cattle from North Dakota into Montana. Preliminary investigation was started to ascertain the numbers of cattle that might have moved into Montana from that area since the estimated time of exposure.

Nine days after the first report, North Dakota called and sadly informed us that cattle exposed to the infested herd had been sent to Dawson County, Montana in December of 1979.

Representatives of the Animal Health Division, while on other business in the east end of Montana and western South Dakota, contacted the owner of the imported cattle and made arrangements to have the state-owned portable vat moved on to his place. Cattle were examined and skin scrapings were taken from animals exhibiting clinical signs of infestation, and were submitted to the Diagnostic Laboratory. No mites were isolated but a clinical diagnosis of scabies was made, based on signs observed at the time of examination.

The vat was charged and the cattle were dipped for the first time on April 9, 1980 and the second dipping was scheduled and is being carried out April 21, 1980, the day of this writing.

It becomes more evident with this import, that increased vigilance and particular attention must be paid to the imports of cattle from scabies areas. The mobility of cattle, even contrary to normal movement patterns, becomes crucial.

This saga began about April 1979 when a shipment of cattle were moved illegally into a trader's yard in Adams County, North Dakota, probably from either of two northern South Dakota auction markets. These cattle moved to North Dakota, without a proplylactic dip, in violation of that states import requirements.

A portion of this shipment was sold to a local ranch in Adams County. These cattle were pastured with the rancher's own cattle until fall and the purchased stock was then sold back to the trader in September of 1979. These cattle went to various points south and east of North Dakota.

In early December of 1979 this rancher then sold some of his own calves to the same trader with whom he had first dealt. This man mixed 17 head of the rancher's cattle with 98 other "put togethers" and sold these cattle through one of the two auction markets in Dickinson, North Dakota.

From the Dickinson auction, cattle from this shipment were dispersed to four locations in North Dakota and the one location in Dawson County, Montana.

Montana was very fortunate, in that the Montana purchaser of these cattle, one of which was from the infested North Dakota premise, kept the cattle in his ranch feedlot and never allowed them out of the lot so that exposure to his own cattle was minimal. In total 295 head comprised of feeders, 8 bulls and about 30 head of cows and two baby calves have had to be dipped.

Tracing of North Dakota imports that have entered Montana this past year is being carried out presently, and will prove to be a monumental task. 22,363 head of cattle in 1,907 lots were imported from January 1979 through February of 1980.

Again I'd like to caution all practicing veterinarians, please be especially alert for signs of scabies on cattle you see in practice. Take scrapings if you can or notify this office if you have suspicions the cattle may be infested.

It's better to scrape a lot of lice than to miss mites by not scraping at all.

ALBENDAZOLE USE AND SLAUGHTER LIMITATIONS

The Food and Drug Administration has informed concerned agencies that animals (cattle and sheep) that have been treated with Albendazole (SKF) must be individually identified prior to slaughter to enable tracing of animals for tissue residues.

Smith Kline and French, the manufacturers, are presently refusing to supply identification means, since this condition was not one of the requirements made at the time this special license for the drug was issued.

The veterinarian and owner involved in the permission granted to use the drug, are responsible for any tissue residue at the time of slaughter. Anyone involved is cautioned to use utmost care in administration of the drug, adherence to withdrawal requirements, and slaughter identification.

Treated animals should be moved to slaughter, accompanied by a completed VS1-27 (permit for movement) containing identification of animals, owner, slaughter, etc. Identification means could undoubtedly include ear tags, back tags, etc. that are individually listed on the VS1-27.

VETERINARY CLINIC FIRE

The news of Montana, this past weekend, April 26, 1980, contained a brief news article dealing with a fire that had occurred in the Pruyn Veterinary Clinic in Missoula.

We would like to express our regrets to the Dr's. Pruyn over this terrible misfortune.

There was no estimation of damage and we sincerely hope that damage to the clinic and disruption of the practice is minimal.

I. Accessions reported out in March:

	March 1980	March 1979	% change
BOVINE	369	420	-12.1%
EQUINE	38	26	46.2%
PORCINE	19	15	26.7%
OVINE	34	34	
FELINE	10	15	-33.3%
CANINE	45	43	4.6%
AVIAN	3	4	-25.0%
WILDLIFE	6	10	-40.0%
MISC.	27	37	-27.0%
TOTAL	551	604	- 8.7%

II. Serology

A. Brucellosis (all species) total sera -- 24,256
   1. Brucellosis routine tests -- 16,056; 3 positive
   2. Quarantine herd tests -- 501; 23 positive
   3. Slaughter samples -- 7,699; 17 positive

B. Seminal Plasma - Brucellosis -- 18 samples negative

C. Leptospirosis (all species) -- 490 sera
   1. L. pomona -- 37 positive
   2. L. hardjo -- 25 positive
   3. L. interohemorrhagia -- 42 positive
   4. L. grippotyphosa -- 18 positive
   5. L. autumnalis -- 19 positive

D. EIA -- 369 sera; 2 positive

E. Bluetongue -- 928 sera; 3 positive

F. Anaplasmosis -- 578 sera; 3 positive

G. I.B.R. -- 273 sera; 52 positive

H. B.V.D. -- 249 sera; 59 positive

I. Pseudorabies total sera -- 123 all negative
   1. Routine samples -- 28 sera
   2. Slaughter samples -- 95 sera

J. PI_3 -- 133 sera; 39 positive

K. BLV -- 11 sera, 1 positive

III. Rabies

A. 18 requests
   1. Human exposure
      a. 9 negative
   2. No human exposure
      a. 9 negative

IV. Bacteriology

A. Total
   1. 471 accessions processed resulting in 555 isolates

B. Antibiotic sensitivities were run on 419 isolates

C. FAT (clostridia)
   1. 5 positive - Cl. chauvoei (2), Cl.novyi (1), Cl.septicum (2)
   2. 5 negative

D. Mouse inoculation
   1. 1 positive, type C enterotoxemia
   2. 10 negative

E. Salmonella
   1. Salmonella dublin - 3 bovine cases
   2. Salmonella typhimurium - 5 bovine cases

F. Brucella
   1. 12 sets of tissues, representing 11 herds, were cultured at NVSL, Ames, Iowa. 7 were positive for Brucella abortus, Type I and 1 was positive for Brucella abortus, strain 19.

G. Infant Mouse Test for Enteropathogenic E. coli
   1. 45 tests run
      a. 25 positive
      b. 10 negative
      c. 10 inconclusive

H. Miscellaneous
   1. Campylobacter fetus subspecies fetus from 2 bovine fetal stomach contents

V. Virology

A. Virus isolation attempts
   1. 19 cases (15 bovine and 4 porcine
      a. 4 positive - BVD, bovine

VI. Electron Microscopy

A. 79 samples tested
   1. Coronavirus -- 13
   2. Rotavirus -- 5

The Diagnostic Laboratory will be testing samples for Eastern and Western Equine Encephalitis from July 1 to October. Before July and after October 1 samples will be sent to NVSL, Ames, Iowa, for testing.

- The Perpetual Shipper -

The specimen mailing containers purchased from the laboratory do wear out. During the past years the worn-out shippers were replaced at no charge. This practice is no longer feasible and worn-out containers will be replaced at a charge of $2.50 for the outer cardboard shipper and $5.00 for the inner styrofoam. New shippers are available at $7.50.

RABIES IN PET RACCOONS - SOUTH CAROLINA

Two rabid raccoons recently cost the state of South Carolina approximately $10,000 because of their contact with at least 25 people.

In the spring of 1979, a Beaufort County family picked up several raccoon kits along the side of the road. The family kept 1 of the young raccoons as a pet.

When the raccoon attained adult size, it began to show signs of illness, including sudden aggressiveness that resulted in bites and scratches of family members. Finally, on July 9, the animal was submitted to the South Carolina Department of Health and Environmental Control laboratories for rabies examination. The diagnosis of rabies was confirmed.

Many family members and friends had come in contact with the raccoon. Twelve were judged to have been potentially exposed and were treated with a total of 110 cc of human rabies immune globulin (HRIG).

Community awareness about the rabid raccoon led to the discovery that another raccoon, although not from the same litter, had bitten members of another family. Because the animal had escaped, 6 persons underwent antirabies treatment. They received 138 doses of vaccine and 69 cc of HRIG. All treated contacts have remained healthy.

The total cost to the state of the biologics used in these episodes was $5,538, and a conservative estimate of the cost of administration was $2,070. An ambulance kept on standby while patients were undergoing treatment cost an additional $966. To the total, actually documented, cost of $8,574 must be added certain costs that can only be estimated, such as the time and effort of laboratory personnel, the district medical director, staff members in environmental sanitation, the state epidemiologist, state health department staff, involved families, and contacts.

Editorial note: Rabies continues to be a problem in South Carolina. In fiscal year 1979, 138 of the 177 reported cases in animals were in raccoons. The number of specimens submitted for rabies examination doubled last year and is increasing at an even faster rate this year.

The area of the state in which rabies is occurring has also expanded. Several years ago, rabies in raccoons was focused in a small area along the Savannah River; now it is found throughout the state.

Source: Morbidity and Mortality Weekly Report, April 18, 1980, Volume 29, No. 15.

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MONTHLY LETTER

APRIL 1980

PERMITS TO NORTH DAKOTA

It seems that we have been getting an increasing number of missives from North Dakota drawing various veterinarians attention to the fact that they have failed to obtain a required permit on cattle shipments sent to that state.

In the future, if there is any doubt as to the import requirements of any state call that state and find out what you are supposed to do when writing a health to that destination. It could save you some embarassment and tears as far as your accreditation and liability are concerned.

SCABIES IN NORTH DAKOTA

Montana has been notified by Dr. Dean E. Flagg (State Veterinarian of North Dakota) that psoroptic scabies has been diagnosed in cattle in Adams County North Dakota.

The cattle evidently were exposed to cattle that were illegally imported from South Dakota without dipping in accordance with North Dakota's import requirements. The imported cattle were brought in during April of 1979, summered and then sent to both Iowa and Minnesota to feedlots.

Both of those states experienced outbreaks in feedyards involving North Dakota cattle. The Iowa outbreak could not be traced to the North Dakota region due to lack of brands. The Minnesota outbreak was traceable to the ranch of origin in North Dakota.

North Dakota investigators went to that ranch where other cattle on the premise were scraped and psoroptic mites were isolated and identified.

Dr. Flagg informed this Department that dip vats were being moved into the area in an attempt to cope with the situation.

In the meantime, a dip order has been placed against North Dakota cattle and will remain in effect pending further investigation and information.

All veterinarians are again advised to be especially vigilant for signs of scabies in all cattle. The possibility that cattle in the incubating stage could have been imported from North Dakota without any restrictions is quite real.

Any time Montana cattle are worked for any reason please inspect them for signs of scabies infestation. If any are suspicious, please make skin scrapings and submit them to the lab for isolation and identification. Scrape skin and hair at the edge of any lesion deep enough to draw blood, place scraping in an ointment tin, tape the edges and send to the lab.

The signs of scabies include:

1. Rapid tail switching (like heavy fly season).
2. Licking toward back and withers.
3. Scratching against inanimate objects.
4. Alopecia and encruastation with serum and pus.
5. After the infestation is chronic the skin thickens and shows numerous folds.
6. Animals lose weight because discomfort and itching cuts feed consumption.
7. In severe cases, hematoma may result from self mutilation in attempts to relieve pruritus.

When you inspect cattle for the presence of scabies, please submit an SV-17 outlining the investigation.

After seeing cattle in Texas that were actively infested with Psoroptes scabiei it is my opinion that is is a poor cattle man and an even poorer veterinarian that could see these unfortunate creatures in this condition and fail to recognize the diseased state or fail to attempt to treat the stock and clean up the disease.

DEPARTMENT POLICY ON SUPPLIES

It is requested that all requests for supplies (ie forms and so forth) be sent to the Helena office since that is where supplies are handled.

It does no good to call the laboratory for supplies since they do not handle nor mail any except specimen shipping containers. It is inexcusable to casdigate the ladies answering the phone at the lab for not having the supplies.

Collect phone calls cannot be accepted from practicioners seeking supplies. Either phone in at your own expense or send a letter or completed supply request form by mail.

Market veterinarians continue with the previous policy concerning supplies and calls.

USE OF ALBENDAZOLE IN MONTANA

The Animal Health Division has received word from Dr. L. M. Crawford, Director of Bureau of Veterinary Medicine, that the flukicide albendazole has been authorized for distribution in Montana.

The drug has been released under an investigational category, therefore, usage will be dictated by FDA protocol with all the accompanying paper work.

The drug will be obtained through Norden Laboratories along with records keeping procedures, required forms, and informational material.

The drug sponsor expects to have the drug available about April 1, 1980.

I. Accessions reported out in February:

	February 1980	February 1979	% change
BOVINE	272	219	24.2%
EQUINE	30	30	
PORCINE	18	15	20.0%
OVINE	17	12	41.6%
FELINE	23	16	43.7%
CANINE	44	34	29.4%
AVIAN	0	4	-100.0%
WILDLIFE	6	5	20.0%
MISC.	29	24	20.8%
TOTAL	439	359	22.3%

II. Serology

A. Brucellosis (all species) total sera --- 32,677
   1. Brucellosis routine tests --- 21,315; 8 positive
   2. Quarantine herd tests --- 1,357; 14 positive
   3. Slaughter samples --- 10,005; 42 positive

B. Seminal Plasma - Brucellosis --- 19 samples (negative)

C. Leptospirosis (all species) --- 407 sera
   1. L. pomona --- 45 positive
   2. L. hardjo --- 11 positive
   3. L. icterohemorrhagia --- 12 positive
   4. L. grippotyphosa --- 4 positive
   5. L. autumnalis --- 14 positive
   6. L. tarassovi --- 1 positive

D. EIA --- 192 sera, 2 positive

E. Bluetongue --- 278 sera, all negative

F. Anaplasmosis --- 179 sera, all negative

G. IBR --- 206 sera, 104 positive

H. BVD --- 179 sera, 2 positive

I. PI_3 --- 107 sera, 22 positive

J. Pseudorabies total sera --- 86 all negative

   1. Routine tests --- 42 sera
   2. Slaughter samples --- 44 sera

K. BLV --- 13 sera, all negative

III. Rabies

A. 20 requests
1. Human exposure
a. 1 positive (bovine)
b. 16 negative

2. No human exposure
a. 1 positive (skunk)
b. 2 negative

IV. Bacteriology

A. Total
a. 308 accessions processed resulting in 282 isolates

B. Antibiotic sensitivities were run on 198 isolates

C. FAT (clostridia)
1. 1 positive - Cl. chauvoei
2. 3 negative - Cl. chauvoei, Cl.septicum, Cl. novyi

D. Brucella
1. 15 sets of tissues, representing 12 herds, were cultured at NVSL, Ames, Iowa. 3 were positive for Brucella abortus, Type I.

2. 2 sets of tissues representing 2 herds were cultured at this laboratory. Both were negative.

E. Miscellaneous
1. Campylobacter fetus subspecies fetus -- 3 bovine cases
2. Campylobacter fetus subspecies intestinalis -- 3 ovine cases
3. Campylobacter fetus subspecies venerealis -- 1 ovine case
4. Bordetella bronchiseptica -- 1 porcine case
5. Hemophilus sp. -- 1 bovine case

V. Virology

A. Virus isolation attempts
1. 22 cases (12 bovine and 10 porcine)
a. 4 positive bovine BVD cases

VI. Electron Microscopy

As reported previously, we have made arrangements with the Veterinary Research Laboratory's EM facility to check fecal samples from scouring calves for rota and corona virus. Fecal samples may be submitted from live animals. The best sample to submit is approximately 10ml of fecal material in a clean or sterile container. Samples from dead animals should be taken from the small intestine or spiral colon. The fee for the test is $10 per sample. The request on the SV 43 form should specifically state EM scan for rota and corona virus.

During the first 6 weeks of operation 78 samples were tested resulting in 28 corona, 11 rota, 1 corona and rota and 38 negative.

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MONTHLY LETTER

MARCH

Rabies Exposures

From the "Colorado Disease Bulletin" Vol. VIII, Issue 1, 1/5/80.

"A Colorado State University virologist in the school's diagnostic laboratory observed a strongly positive FA test on the brain specimen from a bull". The bull was from a South Dakota ranch that had been found sick and confined for treatment.

The owner had drenched the animal while barehanded. A local veterinarian was consulted but did not actually treat the bull.

After a diagnosis of "hardware" disease, the bull was trucked to CSU where clinicians examined the bull but did not establish a diagnosis. Many of these people had scratched arms which came in contact with the infected animals saliva. The bull was euthanized because rabies was suspected along with several other possibilities in the differential diagnosis.

Altogether 24 clinicians, students and employees of the CSU Teaching Hospital were evaluated for their degree of exposure to the sick bull and their own past rabies antibody levels.

Eleven persons are currently undergoing complete post exposure anti-rabies prophylaxis, ten others are receiving an abbreviated series of the duck embryo vaccine.

It was recommended that the owner of the bull in South Dakota also be treated, as well as evaluation of exposure of other family members.

Coincidentally here in Northeastern Montana an almost identical occurence took place.

Dr. Ken Lee of Scobey was asked to examine a bull this past week because it was off feed and going down hill. On examination the bull had the appearance of an animal suffering from "hardware disease" - pain, humped up, anorexia, etc. Oral examination was conducted without gloves. Rabies was considered as a possibility but symptoms didn't quite fit. The next day continuing to observe the bull, Dr. Lee said that the bull started to "bawl" a rather characteristic bawl, went into convulsions and ultimately died. At the onset of the bawling Dr. Lee was sure he had a rabid animal. The brain was submitted to the Diagnostic Laboratory and was positive on FA examination.

Needless to say Dr. Lee is undergoing anti-rabies prophylaxis. In conversation with him, he stresses the need for veterinarians to keep their anti-rabies immunizations boostered so that exposures may be handled with minimum revaccinations.

The point I'm trying to make is that all veterinarians should be aware of and keep rabies in mind when a diagnosis is being made in any species, especially in the eastern part of the state.

More Rabies

From CDC - Veterinary Public Health Notes, 12/79.

A total of 5 cases of suspected vaccine induced rabies in cats have been reported to CDC since March 1979.

All 5 cases have occured in cats with MLV vaccine containing the SAD strain of rabies virus. In 4 of the cases the cats had been vaccinated with 4 different lots of vaccine from 1 manufacturer and in 1 case the cat was vaccinated with vaccine from another manufacturer.

All cases were confirmed by FA and/or mouse inoculation tests.

Mastitis Control Meetings

Everett Tudor, Bureau Chief of Milk & Egg Bureau has informed me that meetings concerning mastitis control will be held at the following:

March 18, 1980	Billings	Warbonnet Inn
March 19, 1980	Bozeman	Ramada Inn
March 20, 1980	Missoula	Montana Power Building
March 21, 1980	Great Falls	USDA Building

The agenda is as follows:

9:30 A.M.	Registration
10:00	Economic Impact of Quality Milk Production to Producers, Consumers and Dairy Plants - ALLEN BRINGE
10:20	Question and Answer Session
10:30	Engineering Aspects of Quality Milk Production - JOE SCOLARO
10:50	Question and Answer Session
11:00	Managed Milking - JOHN BRYANT
11:20	Question and Answer Session
11:30	LUNCH
12:30	Mastitis Detection - ALLEN BRINGE
12:50	Question and Answer Session
1:00 P.M.	Housing and Environmental Sanitation - JOE SCOLARO
1:20	Question and Answer Session
1:30	Dry Cow Mastitis Management - JERRY OLSON
1:50	Question and Answer Session
2:00	Handling the Mastitis Problem Herd - ALLEN BRINGE
2:20	Question and Answer Session
2:30	Control and Treatment of Specific Udder Infections - JERRY OLSON

2:50	Question and Answer Session
3:00	Panel Discussion
3:30	Adjourn

All practictioners interested and those engaged in dairy practice are urged to attend, since there is a fine slate of speakers.

ANNUAL SPRING CONFERENCE FOR VETERINARIANS

Dr. R. L. Ott, Washington State University, has requested that the following information be related to Montana veterinarians:

March 20-22, 1980. Annual Spring Conference for Veterinarians, Washington State University. Contact Barbara Robbins, College of Veterinary Medicine, Office of Student Services, 130 Veterinary Science, Pullman, Washington 99164, (509) 335-1531.

DIAGNOSTIC LABORATORY NEWS
By Dr. William J. Quinn

I. Accessions reported out in January:

	January 1980	January 1979	%change
BOVINE	254	184	38%
EQUINE	32	24	33%
PORCINE	21	10	110%
OVINE	13	5	160%
FELINE	8	11	-27%
CANINE	43	36	19%
AVIAN	2	1	100%
WILDLIFE	11	8	37%
MISC.	24	20	20%
TOTAL	408	299	36%

II. Serology

A. Brucellosis (all species) total sera -- 37,636
   1. Brucellosis routine tests -- 23,944; 13 positive
   2. Quarantine herd tests -- 1,869; 8 positive
   3. Slaughter samples -- 11,823; 102 positive

B. Seminal Plasma - Brucellosis -- 17 samples (negative)

C. Leptospirosis (all species) -- 360 sera
   1. L. pomona -- 62 positive
   2. L. hardjo -- 10 positive
   3. L. icterohemorrhagia -- 3 positive
   4. L. grippotyphosa -- 7 positive
   5. L. autumnalis -- 9 positive

D. EIA -- 221 sera (negative)

E. Bluetongue -- 351 sera (negative)

F. Anaplasmosis -- 404 sera; 3 positive

G. IBR -- 246 sera; 82 positive

H. BVD -- 198 sera; 5 positive

I. PI_3 -- 84 sera; 29 positive

J. Pseudorabies total sera -- 281
   1. Routine tests -- 206
   2. Slaughter samples -- 75

K. BLV -- 4 sera (negative)

III. Rabies

A. 17 requests
   1. Human exposure
      a. 13 negative
   2. No human exposure
      a. 1 positive
      b. 3 negative

IV. Bacteriology

A. Total
   1. 142 accessions processed resulting in 223 isolates

B. Antibiotic sensitivities were run on 168 isolates

C. FAT (clostridia)
   1. 1 positive - Cl. novyi
   2. 3 negative - Cl. chauvoei, Cl. septicum, Cl. novyi

D. Salmonella
   1. Salmonella cholerasuis (kunzendorf) isolated from a pig

E. Brucella
   1. 22 sets of tissues, representing 17 herds, were cultured at NVSL, Ames, Iowa. Eleven were positive for Brucella abortus, Type I.

F. Miscellaneous
   1. Campylobacter fetus subspecies fetus was isolated on cultures of fetal stomach contents (2) and a preputial wash (1) - bovine cases
   2. Hemophilus somnus (2) and Hemophilus sp. (3) - bovine cases
   3. Bordetella bronchiseptica - porcine case
   4. Trichophyton sp. - equine case

V. Virology

A. Virus isolation attempts
   1. 12 cases (6 bovine and 6 porcine) -- all negative

SEMIANNUAL COMPARISON FY 1979 - FY 1980

	FY 1979	FY 1980	% change
BOVINE	563	731	29.8%
EQUINE	155	147	-5.1%
PORCINE	95	114	20.0%
OVINE	21	47	123.8%
FELINE	101	95	-5.9%
CANINE	239	253	5.8%
AVIAN	40	47	17.5%
WILDLIFE	177	244	37.8%
MISC.	156	147	-5.7%
TOTAL	1547	1825	17.9%

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STATE OF MONTANA

DEPARTMENT OF LIVESTOCK

ANIMAL HEALTH DIVISION

HELENA, MONTANA 59601

SHELVED WITH
PERIODICALS

MONTHLY LETTER

BOARD OF LIVESTOCK

ROBERT G. BARTHELMESS, CHAIRMAN... MILES CITY
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ELMER FLYNN..... MISSOULA
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RALPH J. PARKER..... FORT SHAW
ROBERT M. SIMONS..... TURNER

JAMES W. GLOSSER, D.V.M.

ADMINISTRATOR

&

STATE VETERINARIAN

STATE OF MONTANA
DEPARTMENT OF LIVESTOCK
Animal Health Division
Helena, Montana 59601

MONTHLY LETTER

FEBRUARY 1980

MEETING OF OLD WEST STATES

January 3, 1980 there was a meeting in Pierre, South Dakota of representatives of the five Old West States. These participants, State Veterinarians and members of the various states Sanitary Boards and industry representatives met to explore the possibilities of unifying import requirements of these five states in connection with brucellosis, scabies, EIA, and pseudorabies.

It was anticipated that by adopting similar import requirements and by expending strenuous efforts at eradicating brucellosis and scabies the five states concerned could eventually form a bloc in which livestock could move relatively unhindered thereby eliminating costs and red tape engendered by regulations. Stock moving into any one of the bloc states would have to meet the same set of restrictions and after that would be eligible for movement within those five states.

By standardizing the import requirements the five states can exert increased pressure in urging exporting states to upgrade their own areas and herds and relieve costs and inconvenience due to over regulation.

BRUCELLOSIS TEST ELIGIBILITY

It is again approaching calving time (or its already here in some cases) and once more change of ownership testing of coming 2 heifers is popular. In accordance with the Administrative Rules of Montana a test eligible female is one in which the first pair of permanent incisors has erupted, or the female is in the last trimester of pregnancy (regardless of age or teeth eruption).

Quite a number of veterinarians have called for clarification of this point and some have been boxed into uncomfortable positions because of the rule.

Whenever testing cattle, whether in the country or in a market, the decision to test or not to test is up to the veterinarian and he should base that decision on the above criteria.

CHANGES IN ADMINISTRATIVE RULES

The Department of Livestock has several changes it is contemplating in the Administrative Rules of Montana. Since these changes all affect practicing veterinarians and the cost of sending copies of all the rules to each of over 350 veterinarians is extremely high, we will attempt to digest the rule changes in this newsletter. If any one desires copies of the complete rule change

please notify this office and a reprint will be sent to you. New material underlined.

ARM 32-2.6A(22)-S6010 -- Relating to Brands & Earmarks

"S" on left jaw to designate animals going to slaughter or quarantine feedlot because of exposure to brucellosis.

ARM 32-2.6A(42)-S6220 -- Relating to Disposal of Carcasses

Carcasses of animals that have died from causes other than anthrax must be ... disposed of in a satisfactory manner.

ARM 32-2.6C(1)-S610 -- Relating to Animal Diagnostic Laboratory Fees

The Board proposes to repeal the above rule (S610) and adopt a new rule covering procedures for which fees will be levied and occasions on which fees will be charged.

ARM 32-2.6A(30)-S6160 -- Relating to Biologics

Control of Biologics (1) In this sub-chapter "biologics" means a medicinal preparation made from living organisms and their products. It includes but is not limited to serums, vaccines, bacterins, antigens, and antitoxins.

(4) No person may sell, offer for sale or use brucella antigen of any kind unless specific permission has been given by the state veterinarian's office.

(7) Old paragraph 5 has been deleted. The destribution sale or use of virulent hog cholera virus is prohibited.

(8) The distribution, sale, or use of viable anthrax vaccines is prohibited except by permit from the state veterinarian of Montana.

(9) The sale of any rabies biologic except to a licensed veterinarian or public health agency is prohibited.

ARM 32-2.6A(26)-S6020 -- Definitions of Terms Used

(1) Delete wapiti or cervidae; after species add - the genus cervidae.

(4) who is in the employ of the Department or is a designated brucellosis epidemiologist.

(5) 2 through 6 months (60 to 179 days) beef breed shall be 2 through 10 months (60 to 299 days).

(7)(b) The USDA approved metal vaccination eartag placed in the right ear (delete the rest of paragraph).

(7)(c) or the breed registration tattoo applied in the left ear of the animal is officially registered as a member of a recognized breed.

(8)(a) An official vaccinate in which the first pair of incisor teeth has erupted or not having the first pair of permanent incisor teeth (delete less than 20 months of age).

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MONTANA DEPUTY STATE VETERINARIANS JANUARY 1980

NAME	ADDRESS	CITY	ZIP CODE	TELEPHONE
#ABY, E. S.	821 N. Sargent	Glendive	59330	365-3475
ALEXANDER, JOHN R.	Box 1129	Big Timber	59011	932-3345
xANDERSON, CHARLES K.	Vet. Res. Lab., MSU	Bozeman	59715	994-4705
ANDERSON, JUDITH M.	3475 Beaverhead Lane.	Dillon	59725	683-4444
ANZICK, MELVIN	1104 E. Park	Livingston	59047	222-3011
ARTHUR, ORLEY	Box 67	Roundup	59072	323-2287
BABER, JOE K.	Box 121	Miles City	59301	232-4674
BACHMANN, STEPHEN P.	Box 38	Roundup	59072	323-1585
BAILEY, JAMES H.	Box 1665	Great Falls	59401	453-1629
BARKEMEYER, ARLA N.	P.O. Box 486	Helena	59601	
BASE VETERINARIAN	Malstrom A.F.B.	Great Falls	59402	731-3065
#BAXTER, ROGER	Box 399	Chinook	59523	357-2544
BECK, DONALD L.	Box 494	Baker	59313	778-3532
BELL, ROBERT R.	Box 190	Culbertson	59218	787-6682
BERGLEE, CLIFTON M.	Box 96	Brockton	59213	448-2262
BERGERON, JAN A.	Diag. Lab., Box 997	Bozeman	59715	586-5952
BEUG, JOHN A.	Rt. 1, Box 1	Red Lodge	59068	446-2815
BISCHOFF, MACK T.	Route 2, Box 315	Sheridan, WY	82801	674-4111
BISSONETTE, PAUL H.	RFD Norris	Deer Lodge	59722	846-1925
BLAKEMORE, GARY L.	P.O. Box 109	Roy	59471	464-7151
=BLAWATSKY, VLADIMIR	625 9th Avenue	Havre	59501	265-7736
BOLAND, E. WAYNE	2814 Treasure Drive	Billings	59102	652-2066
BRISTOL, DAVID F.	Glacier Vet. Clinic	Columbia Falls	59912	892-4319
BROGGER, J.N.	920 S. W. Higgins	Missoula	59801	543-7723
BROPHY, R. J.	Rt. 2, Box 2073	Hamilton	59840	363-1123
*BROSZ, H. A.	Rt. 1, 288-15	Miles City	59301	232-0756
BROWN, JOHN LEE	Box 1113	Glasgow	59230	228-8350
BRUCHEZ, K. J.	Box 176	Hobson	59452	423-5555
BRUNER, ROBERT R.	P. O. Box 631	Harlowton	59036	632-5548
BUELKE, DONALD L.	Rt. 1, Box 117-C	Victor	59875	642-3471
BURGAN, JOANNE E.	3701 Old Highwy 93 So.	Missoula	59801	728-1110
BURKHARTSMEYER, JOHN C.	1301 Cedar Street	Helena	59601	442-3160
BURLEIGH, G. WARD	Heath Route	Lewistown	59457	538-9712
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CARLSON, THOMAS H.	P.O. Box 1300	Shell, WY	82441	
CARTER, SCOTT	2930 N. Montana	Helena	59601	442-6450
CASSEL, GARY C.	Box 177	Cut Bank	59427	873-5604
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CLINE, E. R.	Box 821	Lewistown	59457	538-3663
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COLTON, E. F.	Box 206	Kalispell	59901	755-6695
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COOPER, EARL	624 Melva	Oakdale, CA	95361	

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DORAN, M. P.	Box 1665	Great Falls	59401	453-1629
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FELSTEAD, GARY W.	1116 9th St. So.	Great Falls	59403	453-9441
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FRAZER, J. W.	Box 771	Polson	59860	883-5623
FURGESON, H. E.	Crackerville	Anaconda	59711	797-3707
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GEE, J. E.	Box 309	Stanford	59479	566-2687
+GERNER, CHARLES L.	Box 109	Sweetgrass	59484	335-2142
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GREGG, ROBERT L.	Rt. 2, Box 63	Plains	59859	826-3235
GUSTAFSON, R. W.	P. O. Box 546	Conrad	59425	338-3801
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JOHNSON, R. D.	West of Billings	Billings	59101	
JORDEN, EDWARD E.	50 Moore Lane	Billings	59102	252-4159
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LEE, ROBERT P.	P.O. Box F	Choteau	59422	466-2152
LEEDS, JOHN H.	P.O. Box 1823	Havre	59501	265-8901
LESLIE, HUGH A.	Box 457	Ennis	59729	682-4283
LIEN, RAYMOND G.	Box 146	Absarokee	59001	328-3041
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MC CAULEY, E. HUNT.	Gibson Rt., Box 709.	Big Timber	59011	932-2262
MC CLEARY, J. D.	Box 317	Hardin	59034	665-2405
MC DANIEL, LAWRENCE.	P.O. Box 158	Ronan	59864	676-4251
MC FARLAND, W. D.	P. O. Box 369	Fort Benton	59442	622-3732
MC GREGOR, DOUGLAS.	2906 Grand Ave.	Billings	59102	656-8021
=MC ILHATTAN, JOHN A.	2717 McIlhattan Dr.	Bozeman	59715	586-9094
MC ILHATTAN, PATRICIA A.	2717 McIlhattan Dr.	Bozeman	59715	586-9094
MC LARTY, CAROLYN.	4217 2nd Avenue No.	Great Falls	59401	453-2264
MC LARTY, TOM.	4217 2nd Avenue No.	Great Falls	59401	453-2264
MC MULKIN, CATHERINE S.	50 Moore Lane	Billings	59101	252-4159
MC NEW, H. K.	Box 887	Sidney	59270	482-3803
MEIWALD, FRANK W.	675 West 1st	Havre	59501	265-4514
METCALF, FRED L.	Box 449	Drummond	59832	288-3671
MICHAEL, HARRY A.	Box 126	Worden	59088	967-3600
MIKKELSEN, CAMERON.	Route 4, Box 12	Rugby, ND	58368	
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MOORMAN, J. C.	5820 Highway 93 So.	Whitefish	59937	862-2525
MOXEY, L. T.	P.O. Box 6529	Sheridan, WY	82801	(307)672-5668
MURPHY, JOHN PHILIP.	Rt. 1 N., Box 165	Deer Lodge	59722	846-3627
MURRAY, JAMES O.	Route 85, Box 4332	Livingston	59047	222-3700
=NASH, CARL F.	729 Avenue B	Billings	59102	252-7456
NELSON, N. W.	Box 1253	Dillon	59725	683-2385
NELSON, RONALD C.	Double Arrow Vet C.	Choteau	59422	466-2152
NEWBERRY, H. W. C.	1465 Highway 2 East.	Kalispell	59901	755-6766
NEWCOMB, B. F.	Dept. of Livestock.	Helena	59601	449-2043
NOLAND, C. R.	P.O. Box 16	Circle	59215	485-2610
NORDELL, H. L.		Geyser	59447	735-4310
NUGENT, TERRY	2719 Main	Miles City	59301	232-6900
OLSON, ROY.	336 N. Jefferson	Sheridan, WY	82801	(307)672-5824
OPALKA, JOHN D.	2442 W. Central Ave.	Missoula	59801	721-1200
ORR, CONRAD O.	3701 Highway 93	Missoula	59801	728-1110
OTTO, ARTHUR E.	1408 South Main	Kalispell	59901	755-6886
PAINTER, R. D.	2930 Montana Ave.	Helena	59601	442-6450
PAJAS, ANTHONY J.	Rt. 3, Box 1249	Libby	59923	293-7410
PANNETIER, L. L.	3104 Green Meadow.	Helena	59601	443-5874
*PATTERSON, N.D.	Box 919	Lewistown	59457	538-5558
=PATTERSON, R.C.	Dept. of Livestock.	Helena	59601	449-2043
PATTON, B. P.	Box 147	Cascade	59421	468-2207
PEARSON, K. C.	344 1st Ave. W.	Kalispell	59901	755-5046

NAME	ADDRESS	CITY	ZIP CODE	TELEPHONE
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PEEBLES, WILLIAM	P.O. Box 147	Cascade	59421	468-2207
PEILA, JEFFERY C.	Box 248	Forsyth	59327	356-7564
PETERSEN, JOHN F.	Box 1636	Polson	59860	883-5229
PETERSON, DALE K.	Rural Route	Coffee Creek	59424	567-2373
=PRENDERGAST, WALTER	3440 4th Ave. So.	Great Falls	59401	453-0189
+PRIBANIC, H. GRANT	Rt. 3, Box 55F	Bozeman	59715	586-6892
PRUYN, EARL M.	2501 Russell	Missoula	59801	549-6139
PRUYN, MINOTT E.	2501 Russell	Missoula	59801	549-6139
QUINN, WILLIAM J.	Diag. Lab., Box 997	Bozeman	59715	586-5952
RACE, RICHARD E.	Rocky Mtn. Lab.	Hamilton	59840	363-3211
RAGLAND, DICK	Rt. 1, Box 194	Hardin	59034	665-1899
RANDALL, RAY W.	Box 540	Bridger	59014	662-3330
RATHS, WILLIAM R.	P.O. Box 352	Dayton, WY	82836	
REA, JACK	Box 527	Three Forks	59752	285-3225
READ, R. D.	Box 158	Ronan	59864	676-4251
REINART, DONALD W.	Box 1000	Chinook	59523	357-2850
RHYNEER, PERRY		Townsend	59644	266-5794
+RIDGE, W. H.	Box 55	Vaughn	59487	965-3155
RIEK, H. GILBERT	Box 948	Sidney	59270	482-3107
ROBERTS, STEVEN M.	P.O. Box 2905	Great Falls	59403	761-8282
#ROBERTSON, G. D.	Box 1111	Bozeman	59715	587-4275
ROBINSON, BILL J.	P.O. Box 157	Columbia Falls	59912	892-4319
ROGERS, WILLIAM A.	5100 9th Ave. So.	Great Falls	59401	761-8183
ROSS, HERMAN	Box 875	Kalispell	59901	755-6020
SAFFORD, J. W.	Windward Cove	Dayton	59914	849-5447
SAGER, ROBERT	Route 2, Box 303	Belgrade	59714	388-4272
SALBADOR, GUS W.	3217 Yearns Drive	Billings	59102	656-6490
SCHARA, MARDELL	52 Gardens Drive	Butte	59701	494-7053
SCHAUMBERG, PAUL	2 Mi. S. Hghwy 2	Libby	59923	293-3717
SCHENDEL, WILLIAM N.	Box 476	White Sul Sprs	59645	547-3857
#SCHMIDT, FRED R.	Box 494	Billings	59103	252-8645
SCHMITT, JOHN B.	Rt. 4, Box 33	Bozeman	59715	587-9330
#SCHOTT, DALE J.		Belt	59412	277-3542
SCOTT, JAMES A.	Box 1665	Great Falls	59401	453-1629
=SEAMON, GEORGE	Route 1	Silesia	59080	962-3337
SEEKINS, KIRK A.	P.O.Box 2905	Great Falls	59403	761-8282
SHAFFNER, DON K.	650 E. Dillon St.	Dillon	59725	683-2385
#SHEETS, G. H., JR.	Box 189	Miles City	59301	232-2559
SKINNER, RONALD E.	Drawer A	Hall	59837	288-3872
=SKROMS, VALDIS	2129 Lyman Ave.	Billings	59102	248-7411
SLACK, HOWARD	1929 E. 6th Ave.	Helena	59601	442-9238
#SLOBOJAN, G. T.	1620 LaSalle Road.	Kalispell	59901	257-9399
SMILEY, PAUL	5820 Highway 93 So.	Whitefish	59937	892-5385
SMITH, DONALD E.	Box 354	Augusta	59410	562-3340
#SMITH, E. K.	Rt. 1, 3745 Harrison.	Butte	59701	494-3656

NAME	ADDRESS	CITY	ZIP CODE	TELEPHONE
SMITH, RAYMOND C.	Rt. 2, Box 315	Sheridan, WY	82801	(307)674-4111
SMITH, RICHARD L.	Box 189	Miles City	59301	232-2559
SMITH, SHERMAN J.	Box 1111	Bozeman	59715	587-4275
SORENSEN, BRUCE D.	Route 2, Box 303	Belgrade	59714	388-4272
SORENSON, L. W.	P.O. Box 699	Williston, ND	58801	(701)572-7878
SPINELLI, CHARLES Jr.	Route 1, Box 197	Manhattan	59471	282-7676
=STAHL, E. W.	5905 Mullan Road W.	Missoula	59801	543-5354
STAUDT, ARTHUR E.	Star Route	Columbus	59019	322-5924
=STEVENS, EARL H.	770 No. Montana	Dillon	59725	683-4832
STEVENS, MICHAEL K.	533 So. 24th	Billings	59102	656-6320
STEYEE, JAMES B.	P.O. Box 1665	Great Falls	59401	453-1629
STODDARD, A. L.		Broadus	59317	436-2563
%STOENNER, H. G.	1102 So. 2nd St.	Hamilton	59840	363-3211
STOKKE, H. A.	390 No. 13th Ave.	Forsyth	59327	356-7564
STONEBERG, ROSE	Rural Route Box 11	Redstone	59275	
SWARTZ, STANLEY	3701 Hghwy 93 S.	Missoula	59801	728-1110
SYVRUD, ROBERT S.	Route 1, Box 67	Polson	59860	883-4758
TAYLOR, STANLEY E.	Route 2, Box 15	Stevensville	59870	777-5541
THURSTON, DONALD R.	Box 907	Belle Fourch, SD.	57717	(605)892-2844
TIDBALL, WILLIAM.	Box 803	Beach, ND	58621	(701)872-4158
TODD, TERRILL D.	P.O. Box 176	Sheridan	59749	842-5122
TOLMAN, DONALD G.	3700 Hiway 91 N.	Dillon	59725	683-5428
TOMBRE, MATT E.	1340 East Main	Bozeman	59715	587-5518
TOOKE, JAMES G.	Box 211	Ekalaka	59324	755-6494
TURCOTTE, R. L.	Rt. 2, Box 1518	Laurel	59044	698-6722
UTLEY, G. L.		Twin Bridges	59754	684-5514
VAN DER HAGEN, D. D.	Box 659	Big Timber	59011	932-2116
VAN ZANDT. D. L.	Box 447	Hardin	59034	665-2233
VESCOVI, JOSEPH E.	P.O. Box 333	Roundup	59072	323-1585
WALTERS, RON.	Box 81	Belt	59412	994-4705
WALTON, ROBERT D.	P.O. Box 699	Williston, ND	58801	(701)572-7878
WARD, JACK.	Rt. 2, Box 2472	Hamilton	59840	363-2663
WEINANDY, D.A.	313 S. Main, #4	Livingston	59047	
=WERRING, DEAN W.	Grandview Trailer Court-Ave. C., Lot 50	Great Falls	59405	452-8877
WHEELER, DONALD O.	2500 Harrison Ave.	Butte	59701	792-0550
WILLIAMS, THOMAS M.	Box 1253	Dillon	59725	683-2385
=WILLIS, F. SMITH.	Box 205	Kalispell	59901	883-5544
WILSON, JOHN A.	336 North Jefferson.	Sheridan, WY	82801	(307)674-4262
WOERNER, D. E.	Rt. 1, Box 202A	Laurel	59044	698-8977
=WOHLIN, W. A.	3113 Beech Ave.	Billings	59102	656-3680
WOLF, A. BRADEN.	Box 1599	Kalispell	59901	755-6020
WOLFF, EDWARD F.	2411 Dearborn.	Missoula	59801	721-3069
YOUNG, DAVID.	V.R.L., MSU	Bozeman	59715	
YOUNG, M. M.	1230 Euclid	Helena	59601	442-0980
#ZANCANELLA, A. T.	Box 1703	Billings	59103	245-4847

NOTE: # - MARKET VETERINARIANS
* - DISTRICT DEPUTY STATE VETERINARIANS
\+ - VETERINARY MEDICAL OFFICERS, USDA, APHIS, VETERINARY SERVICES
= - FEDERAL VETERINARIANS, USDA, APHIS, MEAT & POULTRY INSPECTION PROGRAM
% - U. S. PUBLIC HEALTH SERVICE, ROCKY MOUNTAIN LABORATORY
x - MARSH LABORATORY, MONTANA STATE UNIVERSITY, BOZEMAN

(8)(b) Delete paragraph.

(9)(a) An official vaccinate (delete through presence of) in which the first pair of permanent incisor teeth has erupted or not having the first pair of permanent incisor teeth (delete under 20 months of age).

(9)(b) Delete paragraph.

(10)(a) An official vaccinate (delete through presence of) in which the first pair of permanent incisor teeth has erupted or, not having the first pair of permanent incisor teeth (delete less than 20 months of age)

(10)(b) Delete paragraph.

(14) Delete after spayed heifers, official vaccinates; add - in which the first pair of permanent incisor teeth has not erupted or that are not in the third trimester, parturient or post parturient.

ARM 32-2.6A(26)-S6032 -- Memorandum of Understanding

(2) Add at end of sentence; if the owner so desires.

ARM 32-2.6A(26)-S6040 -- Identification of Tested, Reactor and Other Animals

(1) Delete blood or sera collection. Add - test on the blood or sera collected.

ARM 32-2.6A(26)-S6050 -- Movement and Dispostion of Animals Other Than Reactors in a Quarantined Herd

(5) A permit may be issued for the movement of calves of either sex, (delete both heifer and bull 8 months) 6 months of age and under from negative dams within 10 days after a negative official test of the dam for brucellosis (delete all after -- at any time within ten (10) days after a negative test).

ARM 32-2.6A(26)-S6070 -- Removal of Herd Quarantine Retest and Record Keeping After Quarantine Removal

(2) (delete sixty (60) days or more than ninety (90)) add 180

(3) (delete ninety (90)) add 180

ARM 32-2.6A(26)-S6105 -- Brucellosis Tests of Swine

(1) (delete paragraph. Renumber next two paragraphs to 1 & 2)

These are the changes that are proposed in the rules, hearings are not contemplated but if more than 25 objections to change are received on any of the rule changes a hearing will be scheduled.

If you have interest in obtaining a copy of the complete rule please notify this agency and one will be sent. These rules will be acted on about March 3, 1980 if no objections are voiced.

DIAGNOSTIC LABORATORY NEWS
By William J. Quinn, D.V.M.

I. Accessions reported out in December:

	December 1979	December 1978	% change
BOVINE	213	198	7.5%
EQUINE	22	21	4.7%
PORCINE	19	14	35.7%
OVINE	5	4	25.0%
FELINE	8	13	-38.5%
CANINE	25	33	-24.2%
AVIAN	2	3	-33.3%
WILDLIFE	14	11	27.3%
MISC.	25	25	
TOTAL	333	322	3.4%

II. Serology

A. Brucellosis (all species) total sera -- 54,261
   1. Brucellosis routine tests -- 40,268; 20 positive
   2. Quarantine herd tests -- 1,387; 11 positive
   3. Slaughter samples -- 12,606; 111 positive

B. Seminal Plasma - Brucellosis -- 12 samples (negative)

C. Leptospirosis (all species) -- 377 sera
   1. L. pomona -- 104 positive
   2. L. hardjo -- 9 positive
   3. L. icterohemorrhagia -- 10 positive
   4. L. grippotyphosa -- 3 positive
   5. L. autmnalis -- 12 positive
   6. L. tarassovi -- 1 positive

D. EIA -- 180 sera; 1 positive

E. Bluetongue -- 497 sera; 9 positive

F. Anaplasmosis -- 431 sera; 3 positive

G. IBR -- 127 sera; 9 positive

H. BVD -- 113 sera; 3 positive

I. PI_3 -- 47 sera; 13 positive

J. Pseudorabies total sera -- 79 all negative
   1. Routine tests -- 27
   2. Slaughter samples -- 52

K. BLV -- 16 sera all negative

III. Rabies

A. 12 requests
   1. Human exposure
      a. 8 negative
   2. No human exposure
      a. 0 positive
      b. 4 negative

IV. Bacteriology

A. Total
   1. 206 accessions processed resulting in 267 isolates

B. Antibiotic sensitivities were run on 217 isolates

C. Brucella
   Six sets of tissues (representing two herds) were cultured at NVSL, Ames, Iowa, with negative results.

D. Miscellaneous
   1. Campylobacter fetus subspecies fetus was isolated on cultures of cervical mucus (2) - bovine cases
   2. Hemophilus sp. - bovine case

V. Virology

A. Virus isolation attempts
   1. 32 cases (22 bovine, 9 porcine and 1 canine)
      a. 7 positive bovine BVD cases
      b. 1 positive bovine IBR case
      c. 1 positive canine Pseudorabies case

OSTEOPETROSIS

by

William J. Quinn, D.V.M.

So far this year, we have seen four cases of osteopetrosis in aborted fetuses. Osteopetrosis is an inherited condition caused by an autosomal recessive gene. It occurs in Black and Red Angus and in Black-White Face cows bred to an Angus bull. The abortions usually occur late in gestation and the fetus is often very small. The mandible is short and the tongue protrudes. In the long-bones the marrow cavity is replaced by solid bone and the affected bones break very easily. The condition is easily diagnosed based on the gross findings and owners should be warned to avoid the same breeding in the future.

MALIGNANT CATARRHAL FEVER

by

William J. Quinn, D.V.M.

Two yearling Angus heifers were sent to the laboratory, by Dr. G. D. Robertson of Bozeman, with a clinical diagnosis of malignant catarrhal fever. Blood and tissues were collected from the animals, with the assistance of Dr. Grant Pribanic, and sent to the Plum Island Animal Disease Laboratory for possible virus isolation. The clinical diagnosis was confirmed by our gross necropsy and histopathology findings.

PSEUDORABIES IN A DOG - CASE REPORT

by

William J. Quinn, D.V.M.

During the past month a fatal case of pseudorabies was diagnosed in a farm dog. This dog was owned by an eastern Montana swine producer, and pseudorabies had been diagnosed in the herd several years ago. Since the original diagnosis was made, the producer has been vaccinating for pseudorabies to control the disease. Clinical signs were reported to be reduced, but not eliminated by the vaccination program.

The dog was presented to the local veterinarian at 11:30 a.m. showing excess salivation, constant chewing motions of the mouth, and was noted to paw at its mouth, especially the right side. The owners reported that the problem began that morning and appeared to be getting worse.

Physical examination revealed an intact, three-year-old Austrialian shepherd with a temperature of 104.5°F. There was a focal hairless area on the right side of the face and the epidermis was wet with serum. The dog was noted to paw at this area in particular. A tentative diagnosis of pseudorabies was made and supportive therapy given. The animal's condition rapidly deterioriated and the animal became comatose and died later that evening.

The head, tonsils, and spleen were forwarded to the Diagnostic Laboratory. The tests requested were rabies and pseudorabies. The owner had his hand in the animal's mouth because it appeared as though a bone had stuck in the animal's mouth or throat.

Fluorescent antibody tests and mouse inoculation tests were performed for rabies, a portion of the brain was fixed in 10 percent formalin and portions of the brain, tonsils, and spleen were inoculated into cell culture.

The tests for rabies were negative. Microscopically a nonsuppurative encephalitis was detected. Intranuclear inclusion bodies were present within the foci of inflammation. Pseudorabies virus was isolated from both the tonsils and brain on first passage. No virus was isolated from the spleen.

Pseudorabies is caused by a herpesvirus. Not only swine, but cattle, sheep, dogs, and cats can be infected by the virus. Swine are much more resistant than these other animals and in many instances the death of contact animals, such as the farm dog or cat, serves to alert the producer and veterinarian to the presence of the disease.

This particular case is interesting for several reasons: 1) it was the first confirmed case in a Montana farm dog; 2) it occurred on a premise known to be routinely vaccinating for pseudorabies; 3) the microscopic lesions were similar to canine distemper; and 4) the dog originated from an area known to be endemic for rabies.

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Jan. 1980

STATE OF MONTANA

DEPARTMENT OF LIVESTOCK

ANIMAL HEALTH DIVISION

HELENA, MONTANA 59601

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MONTHLY LETTER

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&

STATE VETERINARIAN

STATE OF MONTANA
DEPARTMENT OF LIVESTOCK
Animal Health Division
Helena, Montana 59601

MONTHLY LETTER

JANUARY 1980

PERMITS - OTHER STATES

It has come to my attention that many veterinarians are not obtaining permits from states requiring import permits. We have been getting an inordinate number of returns from Nebraska, North Dakota, and Wyoming. Please when you are sending livestock to these states be sure and call ahead for a permit.

MILES CITY RAM SALE FOR 1980

All veterinarians certifying rams for the Miles City Ram sale should be aware of the following changes in sale requirements.

"The ram sale committee has adopted a rule that will require vaccination for Ram Epididimitis on rams brought to Miles City for the 1980 ram sale. Note that two shots are needed with application 30 days apart. For those who sell rams to Canada or Japan you can thus wait until just before the ram sale to vaccinate if you so wish. Tatoo will be required for identification.

NEW RE RULE: Rams must be vaccinated for Epididimitis in the ten months prior to the sale. The vaccine must be administered by a deputy state veterinarian, be completed at least 30 days prior to the ram sale date and the rams must be tattooed and a certificate issued in accordance with the Montana Department of Livestock rules. A copy of the certificate of vaccination showing BOTH dates of the initial immunization must be furnished the sale manager not later than September 1 of the sale year."

The vaccine is available through Midland Veterinary Supply, Box 1703, Billings, Montana, 59103.

FOREIGN ANIMAL DISEASE SEMINAR

The School of Veterinary Medicine, Oregon State University has announced that a seminar on foreign animal diseases will be held in Corvallis, Oregon, April 9 through 10, 1980.

There will be a full two day program with a number of speakers addressing many different aspects of foreign animal diseases. Foot & Mouth Disease, Renderpest, African Horse sickness, Venezuelan Equine Encephalomyelitis, African Swine Fever, and many other topics are on the agenda. If interested, please contact the Office of the Dean, Oregon State University, School of Veterinary Medicine, Corvallis, Oregon, 97331.

DIAGNOSTIC LABORATORY NEWS
by William J. Quinn, D.V.M., Chief, Diagnostic Laboratory Bureau

I. Accessions reported out in November:

	November 1979	November 1978	% change
BOVINE	147	144	2.08%
EQUINE	22	27	-18.51%
PORCINE	17	26	-34.61%
OVINE	6	4	50.00%
FELINE	13	18	-27.77%
CANINE	26	41	-36.58%
AVIAN	7	7	
WILDLIFE	12	4	20.00%
MISC.	13	30	-56.66%
TOTAL	263	301	-12.62%

II. Serology

A. Brucellosis (all species) total sera -- 63,461
   1. Brucellosis routine tests -- 52,458; 16 positive
   2. Quarantine herd tests -- 1,118; 29 positive
   3. Slaughter samples -- 9,885; 81 positve

B. Seminal Plasma - Brucellosis -- 19 samples

C. Leptospirosis (all species) -- 435 sera
   1. L. pomona -- 20 positive
   2. L. hardjo -- 14 positive
   3. L. icterohemorrhagia -- 13 positive
   4. L. grippotyphosa -- 6 positive
   5. L. autumnalis -- 11 positive
   6. L. tarassovi -- 3 positive

D. EIA -- 159 sera; 5 positive

E. Bluetongue -- 312 sera; 1 positive

F. Anaplasmosis -- 239 sera; 2 positive

G. IBR -- 123 sera; 16 positive

H. BVD -- 88 sera; 9 positive

I. PI_3 -- 50 sera; 22 positive

J. WEE and EEE -- 3 sera all negative

K. Pseudorabies total sera -- 109 all negative
   1. Routine tests -- 79
   2. Slaughter samples -- 30

L. BLV -- 12 sera all negative

III. Rabies

A. 24 requests
   1. Human exposure
      a. 11 negative
   2. No human exposure
      a. 0 positive
      b. 13 negative

IV. Bacteriology

A. Total
   1. 191 accessions processed resulting in 257 isolates

B. Antibiotic sensitivities were run on 214 isolates

C. FAT (clostridia)
   1. 1 positive - Cl. chauvoei
   2. 5 negative - Cl. chauvoei, Cl. septicum, Cl. novyi

D. Salmonella
   1. Salmonella dublin isolated from 7 calves
   2. Salmonella eimsbuettal isolated from a pig
   3. Salmonella tennessee isolated from a horse
   4. Salmonella typhimurium (copenhagen) isolated from a calf

E. Brucella

The Bozeman brucella culture laboratory was non-functional during November due to deterioration of equipment.
Three shipments of tissues (9 animals representing three herds) were cultured at NVSL, Ames, Iowa, with negative results.

F. Miscellaneous
   1. Moraxella bovis -- bovine case

V. Virology

A. Virus isolation attempts
   1. 21 cases (14 bovine and 7 porcine) 2 positive bovine cases - BVD

The abortion season is with us. In cases of bovine abortion please submit the following:

FRESH TISSUES

Fetal stomach contents

Fetal lung, kidney, spleen and placenta

Blood samples from the dam -- with an accompanying SV2A

FIXED TISSUES

Placenta, lung, liver, spleen, and kidney

This year the Diagnostic Laboratory will be able to screen fecal samples for viruses (rotavirus - coronavirus) in cases of calf scours. This is possible due to an agreement with the Veterinary Research Laboratory's EM facility. There may be a fee charged for these samples; please contact the laboratory for details, phone 586-5952

SCABIES INTENSIFIED

As probably all of you know, the spread of Psoroptic scabies through the western United States has been an increasing problem in the past 7 or 8 years. Up until the present, Montana, through a rather stringent program of import requirements, has remained free from the mite caused disease.

In the middle of December, an alert Beaverhead County veterinarian, Dr. Tom Williams, diagnosed scabies in an imported Brahma steer. The laboratory confirmation from Bozeman incriminated Sarcaptes scabei as the etiologic agent. This diagnosis was upheld by NADL at Ames, Iowa.

Measures were taken to identify the problem cattle and their contacts and prepare for the dipping necessary to control the problem.

At this same time an import violation, involving cattle from California and Nevada, (areas that require dipping before entry into Montana) was investigated and preparations were made to dip the offending cattle.

The state owned portable swim vat was moved to the Dillon area, charged with .5% Toxaphene and the cattle in question were dipped under the supervision of Department of Livestock personnel.

At the time dip arrangements were being made the county sanitarian in Beaverhead County was contacted to approve disposal of the used chemical. A dry land clay soil site was elected between Grant and Bannack and approved by the sanitarian for disposal.

The morning the vat was to be discharged the sanitarian reversed his decision and would not allow disposal at this site. During the course of several conversations between this man and the Department veterinarians he stated that this chemical could not be disposed of in Beaverhead County.

After contacting the Solid Waste Bureau of the Department of Health & Environmental Sciences a decision was rendered that disposal could be accomplished by depositing the spent chemical in a Class I Hazardous waste dump.

There are no such dumps in the state of Montana!

Next it was decided by the Beaverhead County sanitarian and the Solid Waste Bureau that the toxaphene could be emptied into a plastic lined pit and allowed to evaporate with the resultant sludge being hauled to a Class I site and disposed of.

While preparations for this maneuver was being carried out the Solid Waste Bureau contacted the Environmental Protection Agency and jointly they came to the conclusion that toxaphene could not be disposed of in the state of Montana!

At present the Department of Livestock is faced with an apparently insoluable problem.

A $15,000 portable vat charged with approximately 3000 gallons of toxaphene is sitting about 100 yards from the Beaverhead River in the midst of winter. Luckily the weather has not been severe so the danger of freeze up and rupture of the vat is minimal until the weather changes.

The Animal Health Division's program to require cattle coming from scabies areas to be dipped has evidently "come a cropper" since we cannot dispose of toxaphene in the state of Montana.

Another grand case of internecine warfare in the government. One agency attempting to carry out its lawful charge of controlling animal disease and protecting the livestock of Montana from outside disease, while it is hamstrung by another agency attempting to carry out its lawful charge of protecting people and the environment from contaminations.

Who is the loser? Only the people of the state of Montana and the United States. It can almost be guaranteed that Montana's cattle population will have scabies moving uncontrolled throughout if those cattle cannot be dipped in a sensible control program. A sensible control program also entails being able to dispose of the used chemical.

Granted, indiscriminate use and dumping of a toxic substance is to be avoided, but toxaphene has been used in the south for many years as a control spray in cotton fields and several states have scabies programs involving several hundred dip vats containing toxaphene.

One of the problems, evidently, is the federal governments unwillingness to recognize some of the manufacturers work done in disposal and degradation of toxaphene.

At any rate once again the cost can be borne by the cattleman through increased loss, and it surely will come in this climate, and by the meat consumer through increased food costs.

And government can be proud of its idiotic actions in further hamstringing a segment of the U.S. Economy.

Disgustedly, Brad.